

MONEY & BANKING



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MONEY
&
BANKING

by J. MARVIN PETERSON
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MIAMI UNIVERSITY
OXFORD, OHIO



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PREFACE

When authors venture to prepare a new textbook, they usually hope to provide new factual materials not previously available for use in college classes, to give recognition to changing theories which compose the structure of a body of thought or perhaps to accomplish both. In presenting this book we have sought to achieve both of these requirements for present-day courses in Money and Banking. We are aware that opinion in the field is now less clearly crystallized than it has been for many years. Moreover, the factual, descriptive data have multiplied greatly. From such a wealth of material we have chosen that which seems to us best to illustrate the principles which underlie economic trends and which arouse the justifiable curiosities of the student.

Not so long ago the outlines of most textbooks were constructed around two propositions. They were (1) that the international gold standard, the best form of monetary organization yet conceived by man, must be preserved; and (2) credit extended by commercial banks should be restricted as far as possible to short-term loans for productive, commercial purposes. We do not question the validity of these principles when they operate in an environment appropriate to their use, but it has been impossible to employ such principles to explain the policies of control over money, credit and banking in operation today.

No rigid framework of thought has been formulated as a substitute for the principles stated above. We have been disposed to emphasize the evolution of monetary and banking doctrines and institutions rather than formal principles. Dogmatic statements often provide a neat and internally consistent explanation of the kind of monetary and banking organization the makers of such statements would like us to have, but such statements too frequently ignore many facts that are irreconcilable with them. Such statements are intended to afford bases for discrimination between correct and incorrect practices or policies. The evolutionary point of

view does not, however, preclude all bases for judgment since it may reveal that certain actions ignore the lessons of past experience and can therefore be condemned, while others which take adequate account of experience may be approved.

The specific characteristics of this book are the result of the general point of view adopted. A few of these characteristics may be mentioned, not with any claim of originality or uniqueness, but rather to acquaint the reader with the reasons for certain features.

(1) A chapter on Modern Media of Exchange is included early because it is essential to a description of our monetary and banking organization. (2) In Part II, an attempt is made to show the general historical and institutional setting in which the individual bank operates. (3) In Part III, The Banking Process, the point of view of the individual bank is followed through the chapters on bank capital, deposits, loans, and investments. The chapters on the reserve problem, bank credit expansion, and clearings reveal the relationship of the individual bank to the whole banking system. (4) In Part IV, a description of some noncommercial banking operations is presented. The growing importance of noncommercial banking both inside and outside the sphere of the so-called commercial bank seems to justify placing the discussion of noncommercial banking adjacent to the description of the commercial banking process. (5) The chapters on the value of money have been placed late in the book because monetary theory has more meaning to a student after he has acquired a knowledge of banking theory and practice. (6) In Part VI, The Control of the Money Market, a description of the structure of the money market and analyses of the guides and the instruments of credit control are presented before a discussion of control by central banking authorities and the Treasury is attempted. (7) In the chapters dealing with foreign exchange scant attention is paid to present-day arbitrary methods of fixing exchange rates because these methods are transitory in nature. Similarly, no attempt is made to single out for detailed discussion the many proposals concerning the gold problem. A list of such proposals, together with a special bibliography, is presented for the convenience of any instructor who might wish to engage in more or less extensive discussion on this subject.

The materials in the last chapter, Recent Monetary Theory and Theories of Control, might have been included in earlier parts of

the book. Our reason for placing the discussions of these topics at the end is that the proposals which are mentioned are highly controversial and will probably be subjected to important emendations before becoming a part of the generally recognized structure of monetary and banking thought.

Our problem of recognizing all those who have aided us is great. Gratitude is due those who have generously permitted us to quote from their materials. We earnestly hope that our use of them out of their context has not resulted in any unfairness to their general argument. Special acknowledgment is due to The Central Trust Company, Cincinnati, Ohio, for the illustrative materials used in Chapter XV, to the Bank of America for the illustrations used in Chapter III, and to the American Bankers Association for materials used in the preparation of Chapter XVI.

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OXFORD, OHIO
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THE MECHANISMS OF EXCHANGE

CHAPTER I

THE NATURE AND FUNCTIONS OF MONEY

The evolutionary point of view. — Money owes its importance in modern commerce to the productive efficiency of an economic system which is characterized by a high degree of specialization. A high development of specialization would be impossible without the use of some kind of money. Therefore the changes which bring about increased specialization are in many respects similar to those causing the evolution of money. The most important factors in the evolution of money are: (1) increases in population, (2) improved methods of production, and (3) stability of the political system.

Probably the first type of specialization used by man was a division of labor based upon sex, when the men spent their time in hunting, fishing, and fighting and the women cultivated the land and carried on the household arts of textile manufacture and food preparation. As the population grew, the demand for available resources increased. Although specialization provided a means of escape from declining per capita production, it was not the necessary consequence of a low level of subsistence. For centuries, the expansion of population was retarded because of a lack of knowledge of ways of increasing the volume of goods, but the emergence of complex specialization and new productive techniques were the means of increasing production and permitting population to grow and to spread over areas previously only sparsely settled. The interaction of the forces affecting the increase of population, the degree of economic specialization, and the methods of exchange fostered the development of the money system, but the increases in production brought about by these factors required constant improvement in the system of exchange, since more productive units were involved in the economic process and since a greater per capita output was to be transferred.

The continued growth of manufacturing and commerce also was influenced by the development of national states, in which concepts of private enterprise and freedom of contract found expression. As

long as property was constantly in jeopardy of appropriation, whether by outsiders or by domestic rulers, there was little incentive for accumulation of private capital or for trade. Therefore the crystallization of national boundaries and the establishment of more stable legal institutions encouraged economic changes which stimulated the use of money.

A growing population, increase in technical knowledge, and political stability are important factors in the growth of complex specialization which, in turn, give greater importance to money. As these variables increase the complexity of the economic system, the tasks performed by the money medium become more difficult and it becomes necessary for money to be changed to a kind that can adjust to these new problems. Specialization then determines not only the importance of money but also the kind of money most appropriate to a particular type of economic organization. If the volume of trade is small, the money medium can be some crude material, since the process of exchange is of little value. But if conditions become more complicated through the expansion of production by means of specialization, money must be improved in order to adjust to the new conditions.

Interrelationships between the monetary system and the economic and political organizations are well illustrated by events occurring during the nineteenth century. The dominant policies of the English system, reinforced by a strong banking and financial organization, were being spread throughout the world of commerce. The most important of these policies were free trade, a free gold standard, and the theory of *laissez faire* as expressed in the limited functions of the state. As long as the theory of *laissez faire* was followed both by business and by government, the gold standard proved fairly effective. The growth of rigidities of prices, monopolies, and government regulation of business leading to the decline of *laissez-faire* policies brought about the conditions that made the gold standard unworkable.

The economic disequilibrium of the period following the World War, intensified by the attempts of individual countries to solve their problems by tariff restrictions and price stabilization, was inconsistent with a free gold standard. Later, the development of dictatorial forms of government, involving a still more rigorous control over economic life, led to conditions totally incompatible

with the use of money systems that were freely organized. Specific instances of political intervention in the organization of money are the English departure from the gold standard in 1931 and the subsequent establishment of the Stabilization Fund, the deliberate devaluation of the dollar by the United States Government in 1933 and 1934 in an effort to raise prices, and the German control of exchange established for the purpose of regulating foreign commerce. Thus monetary organization which for many years had enjoyed a leisurely evolution in response to the advancing arts, rapidly became an instrument of aggressive statecraft. Such an instrument, at once so powerful and so pervasive, is not likely to be overlooked by statesmen confronted by the vexatious problems of stagnant business and chronic unemployment.

A point of view that will be found useful in examining the contemporary organization of money and the ideas which produced and which continue to influence monetary and banking institutions might be stated as follows: *money and banking institutions are closely related to the general economic organization of which they are a part, and changes in the ways of making and spending income are likely to lead to corresponding changes in ways of making payments and organizing and coordinating economic values.*

The study of monetary and banking institutions from the point of view of their evolution should help one to be objective with reference to the value of a particular practice. Changes in other phenomena, whether social, economic, or physical, do not permit us to conclude that man's methods of organizing his efforts are improving. With reference to changes in banking, the organization of a century ago may have operated more satisfactorily in meeting the problems of that day than the current system meets the requirements of the present. All that can be said is that adjustment is constantly taking place, but that adjustment does not necessarily mean advancement.

The evolutionary point of view in other fields. — The evolutionary point of view so important to the study of money and banking can be applied with equal pertinence to other fields of man's interests. For instance, in the field of marketing, there was a time when a variety of goods, almost as varied as the range of products available at the time, was delivered to the consumer through the general store. Medicine, feed for animals, groceries, dry goods, and

hardware, all were sold to the public through the same unit. Later the mail-order house supplemented this selling unit. However, the ever-increasing variety of goods, the rapidly rising national income, and the concentration of larger numbers of people in towns and cities eventually made such a system of distribution inadequate.

Following the general store were the specialized stores, chains, and urban branches of the mail-order houses. Recently, there seems to have developed a still larger unit, the supermarket, which sells a variety of goods which are turned over very rapidly. These changes have not necessarily come about because someone thought of a superior way to sell goods, but rather because the new levels of income and the greater concentrations of people made these changes feasible. In the future, new methods of handling money and new methods of finance may permit further changes in the distribution of products.

Notwithstanding the fact that evolution is a characteristic of all fields of human knowledge, it should be remembered that certain relationships within these fields are of permanent validity. This being true, a study of money and banking should not only show the changes taking place in response to current social, economic, and political pressures but it should also state those principles of money and banking which are of a more enduring nature.

Money as a cause of disorder. — As long as the economic system functions fairly satisfactorily, little thought is devoted to it, but as soon as the production of goods and services falls below the customary level, the number of suggested ways for improving the system multiplies rapidly. Since most persons would be quite willing to increase their purchases of goods and services if only they had the money with which to do it, many of the "cures" suggested involve the manipulation of the money system. Frequently, attempts are made to solve basic maladjustments by changing the money element, which may not be the cause of the malady, but only the agency through which the disorder is felt. Such an attempt to adjust the economic system is no wiser than to try to repair an automobile by always working on the wheels, judging that since they are always revolving merrily when the machine is functioning best, they must therefore be the source of trouble.

The present state of knowledge concerning money seems to lead to the conclusion that, while there are occasions when money is the

cause of maladjustment, in many instances, money simply reflects changes that are taking place in other parts of the system. It is, therefore, questionable whether problems arising from other causes can be solved or even alleviated by the simple adjustment of money itself.

Definition of money. — It is not so important that a particular definition of money, such as has been chosen for use in this study of money and banking organization, be adopted as it is that, once a definition is decided upon, it should be followed consistently. The definition most appropriate for the study of money from an evolutionary point of view is: *money is anything that is widely used in payment for goods and services and is also used in the discharge of other obligations.* This definition would rule out of consideration those instruments that are periodically employed in times of emergency when the money and exchange system has been temporarily disrupted.

Two other terms which will be used in connection with money are currency and credit. The first of these will be applied to the money which is printed by a government, and which the general public regards as the only money. Credit is a term which will be applied to all those transactions in which payment is deferred until some time after the receipt of goods or services. For example, it is used to designate those bank deposits, the transference of which effect the settlement of an obligation to pay. In such instances, credit may be considered a part of the supply of money since it meets all the requirements of the definition. Credit as it is used in connection with retail trade when goods are charged to the debtor's account is not included in the definition above for the account at the retailer's establishment will not be settled until currency or a bank check is given in payment.

The nature of the money material. — In the earliest days of money economy, the metals copper, bronze, iron, gold, silver, and tin were used as money. No doubt the demand for precious metals to be used in fashioning glittering ornaments, and the need for the base metals in making weapons and tools gave special significance to metals. Almost five thousand years ago, heavy gold and copper rings of standard weight were used in Egypt as money; in China, agricultural implements or their replica were circulated as money. The economies in which some of these objects served were simple and were characterized by a minimum of specialization and low

incomes. When production is small and only a few needs are to be satisfied by exchange, money may be of a crude material or may even be dispensed with.

The qualities that have been regarded as the most desirable in a material that is to form the base of the money system are: (1) general acceptability, (2) divisibility, (3) relative stability of value, (4) scarcity, (5) intrinsic value, (6) malleability.

1. The most necessary of all these qualities is, of course, general acceptability of money by the members of society. If for any reason the money loses this quality, the results are disastrous. In order to prevent too wide variations in the degree of public acceptance, governments undertake, in several ways, to assure its continued acceptance. One of these is the manufacture of coins from precious metals which leads to a less critical acceptance of them by the public. A second method is to confer the status of legal tender upon certain forms of money. When a money is made legal tender, it can be offered in payment of a debt, and failure to accept it when offered relieves the debtor of further obligation to pay interest on the debt. It does not, however, relieve the debtor of the obligation to pay the debt and interest accrued at the time of the offer.

Since money is hard to secure under most circumstances, it might seem an unnecessary precaution for a government to go to such lengths to guarantee acceptance. The reason that it does is that money is not always administered with the best judgment and foresight. At times, governments have debased their money to the point where it has lost most of its value, and people have therefore been reluctant to accept it. Precious metals are incorporated in money when a government has not been in existence long enough for the people to gain faith in its money issues. They demand gold or silver in payment but are satisfied if payment is made in coins made of these materials. After a government has established a record of satisfactory redemption of its money, paper can be circulated without such precautions and no change will occur in the methods of exchange.

2. Divisibility is important as a quality of the money material because the sizes of transactions vary. When cattle were used as money, it was difficult to make an exchange unless the amount involved was an even multiple of the money unit. Division of an animal for an uneven transaction caused it to lose its value as

money. Furthermore, there were such wide variations in the size and quality of the various cattle that, in an exchange, each of the animals had to be appraised separately. A comparable situation would prevail today if a storekeeper had to evaluate each unit of money offered to him. Certainly if such methods were used today trade could scarcely exist. Somewhat the same impediments are present when any other commodity money except metals is used. Since metals are, for the most part, original chemical elements, they are homogeneous and can be divided in any way desirable without losing their identity.

The quality of divisibility has become less important with the development of modern banking. Payments are now generally made by the transfer of a bank deposit, and any denomination may be secured by simply drawing a check for the particular amount. In the United States there have been times when money has been secured by government bonds of large denomination. Redemption in a conventional sense was impossible for small amounts of this money, yet this country did not suffer from a lack of small coins or from use of a currency which did not afford divisibility. Even today Federal Reserve notes are partially secured by the promissory notes of businessmen who have borrowed on inventory. It is clear that one could not demand redemption of these notes even if one desired it. We may say, therefore, that evolution of the banking system has made divisibility at present less important than it was formerly.

3. A money which is approximately stable in value is greatly to be desired because money is interposed between exchanges of goods. Changes in the value of money are disruptive in the same way that changes in the size of the ton or yard would be. Of course, as long as money is made from a commodity, the stability of its value will be limited to the stability of the value of the commodity. Some commodities are more stable in value than others because of their durability. By being virtually indestructible, gold and silver have been accumulated in great quantities throughout the centuries since they were discovered. Hence, additions to the supply from each year's mining operations contribute only a small fraction to the total supply available for the support of monetary systems. Consequently, the supply varies only slightly, and variations in demand are the principal causes of changes in value. Thus a more

stable value is maintained than would be possible if both demand and supply were variable.

The process of selecting gold and silver as money should not be overrationalized. The actual monetary use of gold and silver may have resulted from the high regard in which they were held for other purposes. Their use in modern money systems has often been accidental, yet having been adopted, they were found to serve satisfactorily because they possessed certain qualities considered vital. Their use began, in many cases, before and not after careful thought had been given to the qualities which they possessed.

The degree of stability required of a monetary system is, in part, the result of prevailing economic conditions, and, in part, the result of public desire. For example, the value of money may be equally unstable during two periods, yet in one its variations may have a greater effect upon the distribution of income than in the other. In one period, the volume of contractual obligations may be great, and price and wage levels highly inflexible; in the other, these conditions may be more responsive to changes in price levels.

Also, the increasing proportion of the national income exchanged for money affects the need for stability in the value of money. In the United States the individual produces less and less of the materials needed for his own consumption. In other words, the individual producer is engaged to an ever-increasing extent in producing goods for and rendering services to others. In the earlier periods of American economic development, fluctuations in the value of money were not quite so important as they are today, for a greater proportion of goods was produced for the consumption of the family of the producer. For example, it made little difference whether potatoes sold in the market for 15 cents or \$1.00 per bushel, if the producer intended, regardless of their price, to put them into his potato cellar for the consumption of his family. Today, people are more dependent on the market and are, therefore, more acutely aware of the fluctuating value of money.

The demand for stability in the value of money is affected also by the desire for greater stability and security in all economic relationships. The rapid increase in national regulations having greater stability as their purpose indicates the extent of the demand for stability in contemporary affairs. Social guarantees against the

consequences of unemployment, penniless old age, bank failures, and price competition, all reflect the tenor of modern sentiment.

4. The money material should be sufficiently scarce to give a small amount a comparatively high value. Then it would be possible to carry a large enough sum to settle all ordinary requirements. However, too great a scarcity would so limit the volume of money that production and trade would be impaired. While there are metals that have a higher value per ounce than gold and silver, their use as money is undesirable because they are too scarce. Governments have some control over the amount of money which may be made from a given quantity of metal. Many times in the past, money has been debased by changing the relation of the money unit to the money material. The United States dollar represented 23.22 grains of pure gold in 1932; the Gold Reserve Act of 1934 gave the President power to devalue it by as much as 50 per cent. Acting under this power, the President changed the gold content of the dollar to 13.71 grains of pure gold. This made it possible for a greater number of dollars to be made from or issued against a given quantity of metal.

The greater use of bank checks as a method of making payments has made the relative scarcity of money material very much less important than it was formerly. Today there is little demand for gold as a hand-to-hand money; its chief use is in the settlement of international balances. Consequently, debasement has less influence upon the supply of money in the business of the present than it had a hundred years ago.

5. In a simple economy the acceptance of money is dependent upon the money material having an exchange value which is separate from its value as a money element. One might question whether it is still necessary to use a valuable substance today when most transactions are settled by the use of bank checks; but, as has been said, a considerable volume of business is still conducted between countries where credit cannot always be used. Although all transactions between countries are not settled by the use of gold, nevertheless gold is highly acceptable as a form of payment, even though it has been partially demonetized. Exchange value in the money material is, therefore, still important although less so than formerly.

6. Malleability was a most important characteristic of the money

material as long as the chief form of payment was in coins. In fact, this quality gained in importance when the practice of using coins became general. Coins came into prominence when the kings began to imprint their crowns upon the metal to increase its acceptability and to raise revenues for the state. Today the significance of malleability is distinctly secondary, for almost any material can be used for coinage purposes as long as the coins are redeemable in the basic money material.

THE ECONOMIC FUNCTIONS OF MONEY

The discussion to this point has been chiefly concerned with the qualities of a satisfactory money material. Whether any given substance is thought to fulfill these qualifications is dependent upon the type of economic organization prevailing at a given time. The more complex the economic organization in which money is expected to function, the more difficult will be the tasks assigned to the money. In general, the major functions of money in a modern economy are to serve (1) as a unit of account or standard of values, (2) as a medium of exchange, (3) as a store of values, and (4) as a standard of deferred payments. The fourth function is closely related to the first.

Money as the unit of account or standard of value. — The most important service of money to any society is that of permitting a simplification of the system of counting. In a barter economy where there is no common unit in which values can be expressed, it is virtually impossible to conceive of a closely coordinated system of values. Keynes distinguishes media of exchange and the unit of account as follows: ¹

Perhaps we may elucidate the distinction between *money* and *money of account* by saying that the money-of-account is the *description* or *title* and the money is the *thing* which answers the description. Now if the same thing always answered to the same description, the distinction would have no practical interest. But if the thing can change, whilst the description remains the same then the distinction can be highly significant. The distinction is like that between the King of England (whoever he may be) and King George. A contract to pay a weight of gold equal to the weight of the King of England is not the same thing as a contract to pay a weight of gold equal to the weight of the individual who is now King George.

¹ Keynes, J. M., *A Treatise on Money*, Vol. I, pp. 3-4. New York: Harcourt, Brace & Co., Ltd., 1930.

To understand the importance of the unit of account better, let us suppose that in a certain community the commodities traded are furs, cattle, slaves, wheat, and iron. In order that the illustration may be as simple as possible, suppose further that all furs are exactly alike, as are all other categories of items traded. Then one slave may command in exchange 10 cattle, 30 furs, 200 bushels of wheat, and 2 tons of iron. The value quotations for slaves are made for each of the other commodities. Similarly, the values of all commodities may be expressed in terms of cattle, in which case there would be additional value ratios between cattle and furs, cattle and wheat, and cattle and iron. If an actual case were taken today, we would find that the quotation of prices as they exist would be so complicated as to make the present exchange system impossible, since the number and variety of commodities is so great. When using money, there are as many prices as there are items and kinds of items, but when a barter economy is used there is a far greater number since the value of each product must be expressed in terms of the value of every other product.

Money-of-account is not subject to evolutionary change since it is the title of the thing used as money. When the monetary system of the United States was established, the dollar was chosen as the unit of account. The term "dollar" has continued to be retained, but the media of which the dollar has been constituted have changed frequently, sometimes drastically. In general, paper money of various kinds and bank credits have served as media of exchange. The static character of the unit of account is quite important. Suppose that all values had to be restated in a new form each time the medium of exchange was altered. A corporation would have to estimate the value of the new standard in terms of the old standard and then value its assets according to the new standard. Such a procedure would be costly and would accomplish no greater efficiency of operations. On the other hand, since the system of values is constantly being restated in terms of new media, even though we do not give recognition to these changes by changing the unit of account, it becomes virtually impossible to compare values over any long period of time by means of the money medium. In summary, the unit of account provides continuity in our statement of values in monetary terms; yet it may give to such a statement an appearance of accuracy which actually does not exist.

Money as a medium of exchange. — The second and the most obvious function of money is its use as a medium of exchange. In a money economy, money is interposed between the exchange of goods for goods, while in a barter economy, the goods are exchanged without an intervening step. The usefulness of the first method of trade is due to the absence of coincidence. In a barter economy an individual who wishes to buy shoes may have textiles to offer for them, but the seller of shoes may be willing to accept only food products; consequently, the buyer of shoes must first find someone who wants textiles and who will give food products in payment before he can secure the shoes. The awkwardness and expense of such an exchange process forbid trade in any except the most saleable and necessary items, and diminish the possibility of large-scale production for sale. By reducing the complications of this system, money affords the opportunity for a more efficient productive system. Buyers can search through a wide variety of goods to find satisfactory products and can distribute their purchases over a period of time.

The fact that the medium of exchange is subject to change has already been pointed out. The changes which have occurred in the past have been both accidental and calculated. The limitation of one material out of which money has been constructed may, at times, induce a shift to another, particularly when more money is thought to be needed for carrying on trade. Changes have also been dictated by political expediency, which, while they may have been unwise from an economic point of view at the time, were necessary to the maintenance of a political situation. For instance, a country may completely distort its money system during a war in order to maintain itself as a political unit. The money might have been raised by taxation, but perhaps with greater cost of morale, so necessary during periods of conflict. In this manner, a medium of exchange is subordinated to political purposes with little concern for the economic effects of the action.

Money as a store of value. — Money is frequently held by individuals as a store of value. In a barter economy, every seller of goods or services is, at the same time, a buyer, since he must accept payment in some other commodity. But a money economy permits the separation of the two parts of the transfer process, for money may be held for any length of time without being subjected to the

same processes of deterioration as might a commodity. This quality of money has both its advantages and its disadvantages. It enables the individual to apportion his consumption over a period of time with greater ease and probably with greater consumption satisfaction, without the risk of a large loss. The use of money as a store of value has the social disadvantage of affording an opportunity for hoarding which dries up purchasing power and produces an environment in which business depressions flourish. This situation could not occur in a barter economy, both because there is no generally accepted material and because there is no market to be disrupted if it could occur. For these reasons barter and money economies cannot be compared.

Money as a standard of deferred payments. — It has already been shown that the function of money as a unit of account is closely related to the operation of a money economy. Because of the existence of a unit of account, it is possible for money to serve as a standard of deferred payment, in which event a basis exists whereby goods received in the present may be paid for in the future with the standard prevailing in the present.

The usefulness of such a standard may be more clearly perceived through the use of several examples. Suppose a housewife buys goods during a month and pays her account on the tenth of the following month. She gives in money value an amount equal to the value of the goods acquired during the preceding month. Changes in the value of money are not likely to be so rapid as to disturb payments when the time element is so short. But if the interval between the receipt of goods and final payment for them is a year or more, variations in price levels might disturb the relationship between debtors and creditors, so that more or less purchasing power might be required than if the goods had been paid for when they were bought.

The service of a standard of deferred payments is clearest in those transactions which involve periods of twenty, fifty, or even a hundred years. Suppose the Baltimore and Ohio Railroad had borrowed commodities for the construction of a roadbed and for equipment in 1870, promising to repay them in 1940. In the intervening years, changes in the types of commodities would clearly make it impossible for the railroad company to return materials identical to those borrowed. The return of identical goods would

likewise be most undesirable to the estate of the lender. Thus the standard of deferred payments makes it possible to borrow in order to finance projects needing long-term capital, which otherwise would be impossible to finance.

This function of a unit of account is significant only in a highly developed credit economy, in which a large proportion of the goods and services is exchanged, with the understanding that payments will be made in the future. As the interval between the time that the loan is made and the final repayment is made increases, and as the number of such loans increases, this function grows in importance to the economic process.

THE BUSINESS FUNCTIONS OF MONEY

Consideration of the functions of money to this point has been for the purpose of generalizing without respect to particular economic groups. These economic functions are the most far-reaching of the services performed by the money unit. In order that they may be conceived in everyday terms, we may examine their effects upon the operations of a business. In this connection, business is taken to be the process of producing goods and delivering them to the ultimate consumer; later the benefits to the consumer will be summarized.

The problem of valuation. — The businessman is constantly concerned with values. One of the most obvious points at which this concern arises is in the determination of the value of the inventory. Suppose a manufacturer, with a large variety of goods in his inventory of raw material, semifinished, and finished goods, wishes to determine the amount of his stock. He might accomplish this by counting the number of each separate type of item and comparing the number of each held now with the number held last year. This would tell him how many of each item he owned compared to the previous year. But the method is faulty in that it does not afford a way by which he can summarize his results and learn how much this year's total is worth compared with that of last year. There may be 10 per cent more of some items, 2 per cent less of others, and so on down the entire list. The use of money units would make it possible for the manufacturer to summarize in terms of dollars and to report to his stockholders that this year's inventory is worth a given number of dollars more or less than last year.

Only by having a unit of account can this estimate be satisfactorily made.

Another type of valuation problem occurs when a businessman acquires such an asset as land or a plant. There may be several alternative purchases offered to him. One piece of land may have certain distinct advantages over others that are available, but the price which he must pay is also higher. His problem is to decide whether the extra advantages which the superior land yields are worth the extra price he must pay. In a barter economy, it would be virtually impossible for him to make a sound decision since the things that he would give for each of the pieces of land might all be different and, therefore, he would have to value the commodities he would give as well as the land he would receive. One seller of land might be willing to accept 3,000 bushels of wheat while another would demand 60 tons of steel.

A third type of valuation problem, the solution of which is facilitated by the use of money, is the computation of profits. Since profits result from an excess of selling prices over costs, it is necessary that costs and selling prices be carefully estimated before goods are produced. While even in a barter economy some crude calculations might be made, the enormity of the task suggests that the selling price would have to contain a large allowance for error in calculations. In a money economy, the profit margin can be computed badly or inaccurately, but the task is greatly simplified by the existence of a common unit in which values are expressed.

The problem of liquidity. — Among the other contingencies which must be faced by a business, there is the possibility that creditors will refuse to extend loans, or that bargains may be secured if the resources are available to pay for them. The amount of cash required to be held by a concern is dependent upon the kinds of claims that may be made against it and the type of business carried on. A railroad does not have to maintain large cash balances since its debts become due only after a long period of time, but a bank must hold substantial balances since its depositors may demand redemption at any time. Since money is generally acceptable, it affords the best medium through which a liquid position may be maintained against the occurrence of contingencies that could prove embarrassing to the business or even force its liquidation at the most disadvantageous time.

THE CONSUMPTION FUNCTIONS OF MONEY

It should be apparent that, since money permits the processes of production and distribution to function more effectively, it indirectly benefits the consumer. If the production and distribution of goods were complicated by a cumbersome system of counting, the cost of goods would be raised, for more time would then be spent in arriving at a proper course of action in producing and distributing goods. A further effect of this method would be to reduce the variety and volume of goods offered for sale and thereby to lower the standard of consumption.

A second advantage of a money economy to the consumer is that a simplification of counting also expedites the task of comparing the costs and values of the various goods offered for sale. Careful and successful buying, whether by the consumer or by the manufacturer, must be based upon a comparison of the merits and demerits of the myriad of actions that could be taken. By making this task simpler, money affords the consumer a better chance to make purchases that will represent his best judgment of the alternatives offered.

Finally, the time options permitted by the use of money are of great advantage to the consumer, for, without some liquid object, he would be forced to accept his income in the form of commodities that might, because of deterioration, lose their value before he could consume them. In receiving payment in money, he is able to postpone his purchases until the most advantageous time from his point of view, thereby increasing the satisfaction which he receives. Time options also permit the consumer to protect himself against certain kinds of emergencies. With his money, he can hold a reserve of purchasing power so that, if he finds his future needs to be different from his present needs, he can shift his buying from one set of objects to another without inconvenience or difficulty. Today he may desire clothing, housing, and food in liberal quantities; tomorrow he may need medicine and the care of a physician. In the absence of a money medium, he would be forced to accept articles less likely to secure these things for him.

INFLUENCE OF MONEY ON SOCIAL VALUES

To some individuals, money is an ominous instrument which perverts spiritual values or causes excessive concentration upon

material objects. "The love of money is the root of all evil" is the simplest statement of this point of view. To state the idea still another way, it is said money causes a pecuniary valuation to be placed upon certain qualities that can be valued only by other methods. Thus, honesty, patriotism, and love come to have a monetary valuation when they should have significance only because of their inherent rightness. In a materialistic world, it is unquestionably true that values tend to become subservient to a material analysis, but it is doubtful whether money can be justly blamed for this condition. It is probable that the materialism of modern valuation derives from more fundamental aspects of human social conduct than simply from the widespread use of money. As long as economic goods are scarce, material valuations are likely to distort the other spheres of valuation, since human existence is usually the foremost of all values.

SUGGESTIONS FOR FURTHER READING

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CHAPTER II

MONETARY SYSTEMS AND STANDARDS

Introduction. — Since money is so vital to the orderly operation of a modern economy, it would be natural to assume that monetary systems and standards had been arrived at by a rational process of thought in which the money organization appropriate to the prevailing economic system had been scientifically developed. Such systems have frequently been set up after careful investigations by experts in the field of money, but the establishment of monetary standards in the major countries has depended as much upon political considerations as upon the requirements of the economic system for a particular means of payment. Moreover, when money has been organized in a particular way, it has accumulated a multitude of defenders and opponents, regardless of how completely such organization may have been outmoded by the changing times.

Since monetary organization shares with other social institutions the characteristic of evolution, it is well for our conception of successful money systems to include a consideration of their adaptability to economic changes. In the following discussion, a number of the most generally used systems will be described. But what are the qualities which make one method of organization superior to others? Probably most students would agree that money should be available in sufficient quantities to enable exchange to develop easily, as population increases and specialization expands, and as technology makes possible a larger quantity and variety of goods; yet money should not be so abundant that it cannot perform effectively the functions usually assigned to it.

Another criterion which is receiving increasing emphasis is that money should be organized to promote greater economic stability. This point of view is not acceptable to some persons because they believe economic instability originates from sources other than money. Therefore, attainment of greater stability is essentially dependent upon control of variables other than money.

It is easier to describe a money system than it is to define it. A money system is the result of laws of a country which have been established to create and to maintain a medium of exchange and a unit of account. At any given time, the media of exchange circulating are the result of past legislative enactments which have not been repealed as times have changed. Thus the money in circulation in the United States today includes seven different types of paper issues, not because the country finds it convenient or necessary to have these various types, but because it seemed unnecessary to reduce the number. Some of them have not been returned from circulation when called for redemption and are so scarce that they exist only in collectors' hands.

THE FUNCTIONS OF THE STANDARD MONEY

In a money system, some one material is designated, or implied in the law, as the standard in which the money will be redeemed or with which parity will be maintained. The paper standard, as will be seen later, simply states that the money will not be redeemed henceforth and thus requires that paper circulate without redemption. In the case of the standards in which a commodity or combination of commodities is used, the standard money acts as a base for the values of all forms of circulating currency. Parity of all monies is accomplished by one of two methods or both: (1) the money material may be coined, thereby making the standard money synonymous with the circulating medium itself; or (2) all the various kinds of money may be made redeemable in the standard money at the option of the holder. As long as either or both of these conditions exist, the value of any money form cannot deviate far from the value of the standard money material.

Where conversion is made possible, the standard metal need not circulate, certainly not in large amounts. In Great Britain, after the restoration of the gold standard in 1925, few gold coins circulated. Silver and paper money were issued instead and were made redeemable at the Treasury in gold. It is apparent, then, that one function of the metal standard is to provide for the complete interchangeability of all kinds of circulating money. Perhaps this function could be performed in other and superior ways, but this has been the traditional method of securing homogeneity of value for all types of money. Another method of achieving the same result

would be to make all money irredeemable and give all types of money equal legal tender power.

The second function of a standard money is its use in the settlement of international balances. A large amount of trade between countries is paid for through the foreign exchange markets without the actual shipment of the money material; the amount by which total exports, including financial transactions, exceed total imports requires that there be available some instrument through which the remainder can be settled. When two or more countries are using the same material as standard money, payment is accomplished easily by the shipment of the standard money. The importer of goods has his money redeemed in the standard and ships an amount of the metal which will buy enough of the money of the foreign country to settle the account. If the same standard money is not used by the two countries involved, then the money material of the debtor country will be used in settlement at the rate or price of the material prevailing in the metal markets of the world. Suppose the United States is on a copper standard and that copper is quoted in Paris at 10 francs per pound. An American desiring to buy 10,000 francs' worth of goods would ship 1,000 pounds of copper to be sold in the market for francs. This copper would be secured from the United States Treasury at the prevailing rate of redemption for the United States money unit.

Types of money standards. — The money standards which have existed in the past or which have been proposed as improvements over prevailing systems are numerous. It is not important that an exhaustive list be compiled here; only those that have actually served or have been given serious attention recently will be discussed. They are:

I. Monometallic or single-metal standard

1. Gold standard

- a. Gold coin
- b. Gold bullion
- c. Gold exchange

2. Silver standard

- a. Silver coin
- b. Silver bullion
- c. Silver exchange

II. Bimetallic standard

III. *Fiduciary standards*

1. Fiat money without control
2. Fiat money where control is attempted (managed money)

MONOMETALLIC OR SINGLE-METAL STANDARD

In discussing the monometallic standard, the gold standard will be taken as typical since it has been the most widely used in modern times. The gold standard employs gold as the sole basis of a country's monetary system. While it is true that this standard has varied somewhat in the countries having the gold standard, nevertheless it has the following general characteristics.

Requisites of the gold standard. — 1. *A legislative enactment must define the standard money unit as a definite weight of gold of a specified fineness.* — For example, the American Gold Standard Act of 1900 specified that "the dollar consisting of 25.8 grains of gold 9/10 fine . . . shall be the standard unit of value, and all forms of money issued or coined by the United States shall be maintained at a parity of value with this standard, and it shall be the duty of the Secretary of the Treasury to maintain such parity." Pure gold, in view of its pliability, cannot withstand the rigors of circulation, for which reason copper alloy, in a definite ratio, is added to give coins greater durability. Among almost all commercial nations, this ratio of pure metal to gold is fixed by custom or law of long standing.

2. *The law must endow this gold unit with privileges of full legal tender.* — This is usually a matter of form since gold has had wide acceptance under most conditions. The procedure, however, is necessary in order to fix the legality of a valid offer in the settlement of disputes over debts.

3. *Free or unlimited coinage must be maintained.* — The government must stand ready to accept gold at its mints in unlimited quantities, in exchange for which gold coin or other forms of money are given. Likewise, it must permit free retirement of all money, either by melting or by redemption. A free coinage does not mean that the cost of minting is borne by the government. In this sense, *free* simply means that anyone may bring bullion to the mint for conversion into coin in contradistinction to a *limited coinage*, for example, when bullion is converted into coin only for the account of the government. When the cost of coinage is borne by the state, it

is said to be gratuitous. A charge which is just sufficient to cover the expenses of coinage is called *brassage*. As long as the charge does not exceed the actual costs of minting, there is no interference with the prerequisite that under a gold standard the money should be at par with gold. If, however, the government makes a profit from its minting operations by a charge greater than the coinage costs, the excess charge is called *seigniorage*.

Seigniorage is the difference between the commodity value of pure metal in the coin and the monetary or nominal value of this metal. This entire difference is *gross seigniorage*. In order to arrive at the net profit, the *brassage* charge must be deducted. For instance, the American silver dollar or silver certificate contains 371.25 grains of pure silver or 412.5 grains of silver $\frac{9}{10}$ fine so that an ounce of silver (480 grains) yields \$1.29 in coin or certificates. Under the Silver Purchase Act of 1934, the United States Government, through the Treasury, buys silver at various prices which, up to the present, have not exceeded 77.57 cents per ounce. In other words, every time the Treasury buys an ounce of silver and stamps it in the form of a coin or issues silver certificates against it, there is about 50 cents' worth or more of potential profit or seigniorage. The government has not yet taken advantage of this profit by issuing silver certificates against it. The potential seigniorage on the silver bullion held by the United States Government at the end of September, 1940, was \$1,040,100,000.

4. *Restrictions must not be placed on the free movement of gold* from the arts and industry into money and from money into the arts and industry; nor must there be any interference whatsoever in the export and import of gold from foreign countries. A government must maintain the free external and internal flow of gold in order to maintain the gold standard.

This means that an individual may offer gold for sale either in the open market or at the mint, the value of gold thus being equalized between those two markets. As long as the government stands ready to buy fine gold at \$20.67 per ounce (for many years the mint price for gold), no one would bring gold to the open market for a price less than this; on the other hand, should the price in the open market rise above \$20.67, paper money would be presented at the Treasury in exchange for gold and the metal sold in the market. The internal value would thus be stabilized, so far as these

markets are concerned, by the free internal flow between the market and the mint.

The free external movements of gold reduce the limits within which the value of a particular currency unit may fluctuate in terms of other monetary units. Assuming that the British money unit exchanges for \$5.00, that is, the gold content of the unit is five times that of the dollar, and that the cost of shipping gold from New York is approximately 2 cents, it would be impossible for the British money unit to sell for more than \$5.02 or less than \$4.98. In the one instance, an individual would ship gold to England rather than pay the extra amount for English money; in the other, the Englishman making payments in the United States would ship gold here rather than accept a lower price for his money.

5. The last requirement of a gold standard is that: All types of money must be convertible into gold. Gold reserves must be maintained in order to effect this conversion, although they need not be equal in size to the obligations that can be offered. As long as the reserves are large enough to satisfy all actual demands, they are adequate for maintaining convertibility.

The gold coin standard. — When a government actually coins gold and maintains ready convertibility of all types of money into gold coins, it is said to be on a *gold coin standard*. With a few exceptions, the leading countries of the world were on the gold coin standard before 1914. The monetary excesses of the World War and postwar periods, during which all countries departed from the gold standard, stimulated a desire to return to a stable form of money. But the high levels of prices which prevailed after this episode made it difficult to secure enough gold to support all the currencies that had previously been so organized. This resulted in a desire to economize the use of gold as far as it was consistent with a gold standard. Consequently the circulation of gold was generally discouraged, and its concentration in the banks and treasuries where it could be used as reserves was provided in a number of ways.

The gold bullion standard. — The chief discouragement of the circulation of gold was the redemption of money in bullion rather than in coins. When this type of redemption is used, we have the *gold bullion standard*. The circulation of gold can be reduced by this method, for gold bars will be accepted in payments for goods and

services only after an assay is made to determine their degree of purity. Since this step involves some expense, it is cheaper and easier for the public to pay in other forms of money. A second type of discouragement to the circulation of gold is indicated in the return of England to the gold bullion standard in 1925, when the money was made redeemable in bars of not less than 400 ounces which sold at a mint price of £3-17s.-10½d. per ounce, or the equivalent of \$14,000. The limitation of redemption to larger amounts forbade the presentation of small quantities of notes at the mint and the holding of gold by the general public, thereby reducing the demand for gold and permitting the operation of the gold standard on a smaller reserve than would have been possible if redemption had been made in gold coin.

For all practical purposes, there is no difference between a gold coin and a gold bullion standard. As long as a country stands ready to buy gold with its money and to convert its notes into gold at the same price, no price differential will exist between mint and market rates and hence all monies will circulate concurrently.

The gold exchange standard. — Some of the countries returning to the gold standard after the World War accepted a "limping" gold standard, which is usually referred to as the gold exchange standard, and is quite distinct from both the gold coin and the gold bullion standards. The gold exchange standard is, like the gold bullion standard, primarily a result of the postwar demand for economy in the use of gold. It had been used more than a century before in the operation of the Scottish banks, when redemption was made through the use of bills drawn on deposits in London banks.¹

Following the World War, several countries, notably Germany, wished to maintain their currencies at a parity with gold for purposes of foreign trade but were unable to do so because of inadequate gold reserves. They accomplished parity by making their monetary unit indirectly convertible into gold; their money was made redeemable in the currency of a country which could so redeem it. Anyone securing gold paid a premium in the form of shipping costs from the central bank of the foreign country to his home country.

¹ Laughlin, J. Laurence, *A New Exposition of Money, Credit and Prices*, Vol. I, p. 468. Chicago: The University of Chicago Press, 1931.

In some instances, the country on a limping standard kept some gold in its own treasury to use in redeeming notes in gold when the gold was intended for industrial uses at home. Since the greater part of the demand for gold was for use in foreign trade, only small gold reserves were held within the country.

Conditions appropriate to a gold standard. — It has been suggested that certain economic conditions are essential to the successful maintenance of a gold standard of any of the above types. The following three are the most important of these conditions:

1. *A flexible price structure must be maintained.* — Only when an out-flow and an inflow of gold result in a decline and rise respectively in the price level of any country can a reasonable distribution of gold among countries on the gold standard take place. If prices do not react in this manner, a country losing gold will be unable to regain it in the normal process of international trade. As a consequence, it will be forced to abandon the gold standard when its reserves are exhausted.

2. *No undue interference with the flow of international trade can be permitted.* — Only when trade barriers are not excessive can the country losing gold cover its losses by exports of goods and services to other countries. The price adjustments previously referred to cannot operate in the absence of relatively free movements of goods across international boundaries.

3. *The rules of the gold standard must be scrupulously observed.* — A loss of gold must not be counterbalanced by an expansion of credit at home, for such action prevents the fall in prices which must accompany an export of gold if the flow of trade is to be adjusted. In seeking to avoid declining prices, countries have often created conditions which eventually led to the abandonment of the gold standard.

THE BIMETALLIC STANDARD

Definition. — Bimetallism, in contrast to monometallism, is a double standard, that is, it is based on two metals. In the past, gold and silver have been used exclusively as the base for this money standard, even though any other two metals might be employed for a two-metal system. This double standard was introduced in the hope that any deviation of the actual market ratio between the two

metals from the ratio on which the system was based would be impossible. The conditions necessary to the establishment of a bimetallic system are:

1. Free, or unlimited, coinage of the two metals used as a base — usually gold and silver.
2. A fixed legal ratio at which the two metals exchange.
3. A stipulation that both metals are legal tender in order to permit concurrent circulation of gold and silver.
4. No restrictions on the free internal and external movements of the metals.

Whenever a government limits the coinage of either or both metals, it can no longer be said that a true bimetallic system exists. For example, in the United States under the Bland-Allison Act of 1878 and the Sherman Silver Purchase Act of 1890, only a limited amount of silver bullion could be purchased by the Treasury. The resulting system was therefore not bimetallic, for the mint was required to purchase only stated amounts of silver and the Treasury could, at its discretion, redeem certain notes in either metal.

The ratio between the two metals. — The ratio at which gold and silver are accepted at the mint must be defined by law. From January 18, 1837, to the time of the reduction of the gold content of the dollar under the Roosevelt Administration, the legal, or mint, ratio of the United States was approximately 16 : 1. Under a bimetallic standard this meant that a coin containing 16 ounces of silver possessed the same legal exchange value as a coin containing 1 ounce of gold. At the beginning of 1933, the silver dollar consisted of 371.25 grains of pure silver, or 412.5 grains of standard weight, that is, silver $\frac{9}{10}$ fine, whereas the gold dollar contained 23.22 grains of pure gold, or 25.8 grains of standard weight. The market ratio of gold and silver was no longer 16 : 1. In fact, it was closer to 50 : 1 because the market price of silver in terms of gold or lawful money fluctuated around 40 cents per ounce. Since the bimetallic standard was not in operation, this difference in ratios simply increased the Treasury's profit from the coinage of silver money.

Under a bimetallic standard, it is essential that the legal ratio correspond to the market ratio. As soon as the one deviates from the other, a profit can be secured by moving one metal out of the market into circulation as money and moving the other metal out of

circulation into the market. The principle on which this action is based is called Gresham's Law. Assume a country with a bimetallic standard in which the mint ratio is 16 : 1. The market ratio would also have to be at the same point or one of the two metals would circulate and the other would be hoarded. If a discovery of new silver resources caused a fall in the market price of silver and a market ratio of 17 : 1, and the mint figure should remain unchanged, the mint would overvalue silver. If the two ratios do not agree, it is always said that the mint ratio is incorrect. The reason for this is that the mint ratio is arbitrarily determined while the market ratio reflects actual conditions of supply and demand. The higher price for silver at the mint compared with the price on the market causes silver owners to present their silver for coinage. Since 1 ounce of gold will buy 17 ounces of silver on the market, the owner of gold coins and other gold articles will reduce them to bullion, until, we shall say, he receives an ounce of gold which he exchanges for silver. Thus silver goes into the mint where it is coined, and gold goes on the market where it can be employed in the arts and industry or hoarded or shipped abroad. In other words, gold is driven out of circulation by the overvaluation of silver at the mint.

Alleged advantages of bimetallism. — 1. *Scarcity of gold.* — In the past, the world has been exposed periodically to a rather widespread fear that gold would not be available in sufficient quantities to sustain a particular price level under a monometallic standard. Tables of falling prices have been presented as proof that gold had appreciated in value due to a diminishing supply of the metal compared with the growing volume of goods. Later, in a discussion of the value of money, this statement will be shown to be inadequate. Recently prices have fallen when gold production and available monetary gold stocks were greater than ever before. Nevertheless, this argument was used in the period of controversy over monometallism and bimetallism during the nineteenth century, when it was shown that at least one-half of the gold produced was used in the arts, leaving a remainder too small for the support of world trade. No probability for an increased gold production was foreseen by the proponents of bimetallism since the enhanced value of gold, in the years between 1865 and 1896, did not increase its production. The old sources of supply were either exhausted or less productive, and no new sources were discovered.

This argument has little validity. While it is doubtless true that the mining of gold ore leaves less to be mined in the future, the devaluation of currencies, this is to say, the reduction of their gold content, in the recent past, has increased the value of the new output by providing a wider margin between costs of production and mint price. Moreover, with increased government control over economic life, it is possible to operate currencies with substantially less gold than was necessary when the degree of control was comparatively slight.

2. *Compensatory or equilibratory action of bimetallism.* — The argument that a greater stability of prices could be attained through adherence to a bimetallic standard rests on the so-called compensatory action of the two metals involved. It has been shown that, providing the two metals are both endowed with legal-tender privileges at a fixed ratio, whenever either silver or gold falls in value, under the operation of Gresham's Law, the dearer metal is driven out of circulation and the cheaper metal becomes the monetary standard. If the fixed legal ratio is 16 : 1 and an increased production of silver changes the market ratio to 17 : 1, we have seen that the cheaper metal, i.e., silver, ultimately remains as the sole circulating medium or as the money reserve. At this point, the bimetalist argues, market forces will sooner or later correct the situation and restore the 16 : 1 ratio in the market. This correction is made in the following manner: The drain of silver from the market into the mint and thence into circulation will reduce the volume of silver available for sale in the market. Thus a restoration of the old ratio takes place. The movement of gold into the market from circulation has the same effect, that is, it increases the volume of gold offered for sale and thereby tends to diminish its price in the market. The bimetalist argues that the result of these two movements restores the market ratio to the same level as the mint ratio. The entire compensation takes place in the market, for the mint ratio is fixed by law and is, therefore, not affected by the relative supplies of gold and silver in circulation.

The law of compensatory action is not unsound; it is a simple extension of the supply-and-demand analysis to the market price of two metals. Such a compensation would take place if certain conditions, assumed by the bimetalist, were always present. These conditions are: (1) divergences of the market prices from mint

prices shall be small; (2) supplies of the metals in circulation shall be large enough to compensate the divergences; and (3) the public shall not engage in any speculative activity when the market prices fail to correspond to the mint prices. It should be apparent that the first two of these conditions are closely related. If the divergences of the market ratio from the mint ratio are small, little movement of the metals from market to mint and from mint to market will be required for the correction. Extreme differences between the two ratios, such as those occurring as a result of large discoveries of one of the metals, place a great strain on the circulating supplies of the other metal. The scarcer metal may be completely withdrawn from circulation without a compensation being effected.

If there is a possibility of complete withdrawal of one metal, the third condition stated above may become important. Speculators, foreseeing the possible shortage, will withdraw large amounts from circulation. Under these circumstances, the movement of the metals becomes self-reinforcing rather than compensating.

3. *International cooperation.* — Since the success of the principle of compensatory action is dependent upon the existence of large circulations of both gold and silver, it is often proposed that bimetallism be organized on an international basis. The establishment of a common mint ratio for all the currencies of the world would greatly increase the amount of the undervalued metal that could be melted down without exhausting the supply in circulation. Under these conditions, the only demand for the metals, other than a monetary demand, would be for use in the arts and industry. This arrangement would unquestionably improve the chances for successful operation of a bimetallic standard.

Unless the leading nations of the world cooperate in the establishment of a bimetallic standard at the same fixed ratio, the threat of an external drain of the undervalued metal will always exist. If international cooperation is not possible, the interaction of the supply and demand for the two metals, representing world-wide forces, will cause gold and silver to flow to the countries whose mints pay the best price. Ample illustrations are available to demonstrate the results of mixed ratios. In 1792, the United States adopted a coinage ratio of 15 : 1; Spain and France had previously established ratios of 16 : 1 and $15\frac{1}{2}$: 1 respectively. As a consequence, gold was shipped to Spain and France and silver to the United States.

International cooperation, so important to a successful bimetallic standard, has been difficult to secure. All kinds of national interests and national jealousies are at cross-purposes with this unanimity of action. A low price for silver may be desired by the English because of a large trade in the Orient at the same time that Mexico and the United States, as well as other large silver producers, desire a high price. The increased holding of gold by one member of the agreement would cause suspicion on the part of the others that the agreement would be repudiated by that member. Furthermore, if the internal condition of a country were greatly depressed, that country would regard the monetary agreement as relatively less important than domestic conditions and would manipulate its money to secure internal conditions more satisfactory to itself, even though this might mean embarrassment to the other subscribers to the agreement.

4. *Production of gold and silver.* — The defense of bimetallism rests ultimately on the compensatory action of the double standard in keeping the market ratio identical with the mint ratio. It is thus assumed that there will be a rather small annual production of the two metals compared with existing stocks, or that the relative amounts of the two metals produced each year will be subject to little change. That this assumption is entirely unwarranted may be seen from an analysis of the statistics of silver production and prices. Between 1900 and the eve of the World War, annual silver production varied between a low of 165,000,000 fine ounces and a high of 225,000,000 ounces; the price fluctuated between 52 and 68 cents per ounce. From 56.3 cents in 1914, the value of silver jumped to \$1.34 per ounce in 1920. Numerous nonmonetary elements were involved in this spectacular rise in silver prices, which was accompanied by declining silver production. For example, rising costs, due to war conditions, forced the closing of many marginal mines. Mexico, one of the large silver producers, suffered from revolutionary convulsions. Furthermore, since almost three-fourths of modern silver production is a by-product of the production of other metals, production declined as the demand for munitions fell after 1918. From the high price of 1920, silver dropped to 24.56 cents per ounce in 1932, the lowest price in the entire history of silver. World production rose from 171,300,000 ounces in 1921 to 261,000,000 in 1929, only to fall again in 1933 to 164,100,000

ounces. The production of gold during these years generally moved in the opposite direction from the production of silver. It seems, therefore, that the alleged compensatory action of the double standard, while logically sound if the premises be granted, would have been difficult to operate against these extensive fluctuations in prices and production.

Prospect for bimetallism. — Students of money were inclined to believe that the passage of the Gold Standard Act of 1900 in the United States had settled the issue of bimetallism. The arguments for and against the system had been thoroughly discussed in public debates and the country had chosen a monometallic standard. Yet, the issue of bimetallism, involving as it does the self-interest of certain economic groups, has been periodically revived in various forms. The silver producers have been successful in recent years in allying themselves and their issue with the large debtor class of the farm belt and have, once again, passed legislation with respect to silver which has been disturbing to both national and international monetary stability. It seems that as long as the country has silver producers, it will have the issue of silver money or bimetallism. The prospect for complete remonetization, however, is not bright. A system with so little to recommend it, so filled with obvious self-interest, and designed to alleviate a condition that can be more effectively attacked by other methods, is not likely to find the wide acceptance necessary for its adoption. The whole trend of modern thought on money questions lies in a very different direction, as will be seen below.

THE IRREDEEMABLE PAPER STANDARD

Types of money. — Before the irredeemable paper standard is discussed, it is essential that distinctions be drawn between the various types of money.

1. Gold coins, their money value being equal to their commodity value, will be referred to as *full-bodied money*.

2. Other metallic money is issued by the state in the form of *subsidiary money*. This kind of money is coined in smaller denominations than the standard money unit — 50-, 25-, 10-, 5-, and 1-cent pieces. Without such fractional money, ordinary retail transactions would be more difficult. But unlike full-bodied money, the monetary value of subsidiary money far exceeds its commodity value.

For this reason, its coinage is only for government account; the net profits of this coinage accrue to the government as seigniorage. Subsidiary coins are acceptable in trade since they are redeemable in the standard money, and since their quantity is limited to the amount required by current paying habits.

3. Paper money is introduced into circulation because of its greater convenience than metals, to save the wear on gold coins, and for other reasons. An individual, bringing gold to the mint, may choose to receive a gold certificate instead of minted coins. This type of money is backed by a 100 per cent reserve in gold deposited at the Treasury. Since such certificates represent an equivalent amount of metal on deposit with the government, they are known as *representative money*. Gold certificates have not been in circulation in this country since March 5, 1933, with the exception of a few still held in hoard or lost.

4. In contrast to representative money issued against a 100 per cent reserve of specie, there exists another type of government paper money. This class of money is likewise convertible into gold, but only a partial reserve in specie is available for the redemption of these notes that contain a promise of such payment on demand to the bearer. This variety of paper money is called *government credit money*. Such money is issued, not as a substitute for coin as is the case with representative money, but as a means of expanding the money supply beyond the limits imposed by the available metallic base. Obviously, if all the holders of fiduciary money were to present their claims at the same time, the government would be forced to call for a suspension of the conversion privilege as the specie reserve would be inadequate to redeem all outstanding pledges. This would be tantamount to the abolition of the gold standard and the adoption of a paper standard, since paper would then be irredeemable.

5. The moment a government credit issue becomes inconvertible, it ceases to possess any value in itself and circulates only by the authority of that government and by the faith of the public in the reasonable limitation of its volume. This type of money is referred to as *fiat money*, since its circulative power is derived from a government decree or fiat. It is given legal-tender power in order to assure its acceptance in exchange. While fiat money continues to serve as a medium of exchange, it may lose its power as a store of

value and as a standard of deferred payments. Though it is not necessarily true that fiat-money issues result in violent changes in the value of money, such changes have occurred in a great number of cases. In some instances, the changes have been so extensive that holdings of goods were preferred to money, and gold has been used as a standard of deferred payments in place of the customary unit of account.

The chief reason for the violent price changes accompanying many issues of fiat money is that these issues have been undertaken to finance unbalanced government budgets during war periods when greatly increased expenditures were required. Where the expenditures of a government exceed its tax revenues, because of a sudden increase in the former, the printing of money becomes a simpler method of finance than the levying of the taxes necessary to secure the additional revenues. In recent instances when fiat money has been issued without being accompanied by violent price changes, the level of national production has been low and governments have possessed strong means for the control of prices. These contradictions to the inflation which has frequently followed fiat-money issues are therefore due to the fact that restriction of specie payments was undertaken for different reasons in these cases. But there is still the possibility that governments may lose sight of their original objective and permit the excessive expansion of the money supply.

6. In addition to government credit money, there exists *bank credit money* in the form of bank notes and checks. The latter type of money will be described in the discussion of bank deposits.

The issuance of bank notes is permitted in most countries under laws which define the type and amount of security to be held or deposited with the treasury. They may be the obligations either of the individual commercial banks or of the central bank of the country in which they are legalized. These notes correspond in all characteristics, except the type of issuing agency, to the government credit money described above.

The results of fiat-money issues. — A number of different results have followed from the issuance of fiat money. In Chapter IV, several cases are presented which indicate that such issues have had favorable consequences when managed with adequate foresight and when other conditions were favorable. In examining

such cases, one must first take account of the conditions which lead a government to issue fiat money. In general, there have been two widely different circumstances that have caused governments to do so.

First, if a country is at war, the expenses of government increase sharply and tax revenues more slowly, leaving a deficit between income and disbursements. This deficit may be covered by taxation and by borrowing for a period, the length of which is conditioned by the relation of the deficit to the national resources. But if the national resources are not readily released to the government through purchase of government bonds, issues of fiat money may be employed. The spending of private individuals under these circumstances and the diminution of the labor supply for military service further reduces the resources available for productive purposes.

The main characteristic of inflationary periods growing out of such conditions is that the desire for military victory is the compelling reason dictating a continuation of fiat issues even when the rise of prices has indicated its economic undesirability. Moreover, the high level of national output does not permit production to expand in proportion to demand.

When inflation of prices has not resulted from the issuance of fiat money it has been mainly because the action was undertaken for the purpose of creating a rise in prices or relieving a dearth of money supplies. Two factors account for the more favorable results: (1) The cause of the issue is economic and therefore the money is not printed in increasing quantities as is true when a war is being financed; (2) the level of output is generally well below that of full employment, making it possible for output to increase under the stimulus of new demand.

A variety of other possible conditions besides violent inflation or relatively small changes in prices may occur. In England, the index of the wholesale-price level rose from about 108 at the end of 1914 (1900 = 100) to more than 300 in the spring of 1920. In France, due in part to a much greater issue of inconvertible paper than in England, the index of wholesale prices rose from approximately 100 in the fall of 1914 to more than 800 in the summer of 1926. In Germany, the index of wholesale prices rose to a level theretofore undreamed of in world monetary history. From a level

of 100 in 1913, prices rose to approximately 126,160,000,000,000 by the end of 1923, as Germany experienced a complete economic collapse. These three countries chose entirely different paths in their attempts to rectify their monetary excesses. Germany almost completely repudiated its paper money. Only holders of public bonds, and a few others who had secured their bonds prior to July 1917, received 2 per cent of their original investment. In reality, practically all holders were disqualified. After this wholesale repudiation of contracts, Germany established the gold exchange standard. France returned to the gold coin standard in June, 1928, but redeemed its money with only one-fifth as much gold as before the World War. In 1925, England accepted the gold bullion standard at the former parity with gold.

MANAGED STANDARDS

Introduction. — The terms managed currency and managed standard are unfortunate designations, for all standards so far discussed exhibit varying degrees of management. As it is used at present, managed currency, or managed standard, implies a continuing control over the money system in contradistinction to the organization of other standards in which operation is conceived as being automatic. In the standards previously discussed, the establishment of the money unit, and its infrequent adjustment to changes, provides the only direct control over money. In modern suggestions for managed money systems, decisions would have to be made continuously concerning the changes in money necessary to make it correspond with other changes taking place, for example, changes in the flow of investment, changes in population growth, external political disturbances, and labor strife. Proposals for monetary reform usually begin with a criticism of the operation of the standard previously or currently employed, and proceed to a program of monetary reform which, it is argued, will reduce the disadvantages or eliminate them entirely. These programs include criteria for timing the control and an agency through which control may be exercised.

While the proposals for monetary stabilization to be reviewed are new, the attempt to stabilize was initiated many years earlier. Almost a century ago, the best students of the day in England sought a greater degree of monetary stability. The method that they

selected for achieving this goal was the gold standard and certain accompanying regulations in the banking system. The gold standard did not accomplish all that was desired, but it did much to promote a certain kind of stability, namely, stability of the foreign exchange rate by establishing a fixed amount of gold as the money unit.

Criticisms of the gold standard. — Since most proponents of monetary reform begin with an attack on the gold standard, the present investigation will begin with some of their criticisms. The most thoroughly justified argument against the gold standard is that it permits an unstable price level and thereby promotes economic injustice and economic depression.

Under present conditions, a creditor lending a sum of money to a debtor for a period of five years possesses no guarantee whatsoever that, at the maturity of the loan, he will receive the same amount of purchasing power that he originally loaned. If the contract had been made in 1927 with repayment in 1932, he would have received considerably more purchasing power than he loaned, since prices fell sharply in the interval. However, if the loan had been negotiated in 1932 with repayment in 1937, the rise of prices would have robbed him of a part of his command over goods. It is inadvisable to discuss this further until the theory of the value of money has been elaborated; but it is apparent that those who criticize the gold standard from this point of view assume that money so organized is always the cause of variations in the level of prices.

The second major criticism of the gold standard is that it is unmanaged, consequently, it interferes with the smooth operation of the economic system. The proponents of this argument believe that money is the greatest single cause of depressions, and that stable money would permit a higher level of production with less variations from year to year. While the latter part of this statement is probably true, the extent to which unstable money is the cause of depressions is uncertain.

The third criticism of the gold standard is that it is inconsistent with control over the economic life of the country to any considerable degree. It therefore interferes with any efforts toward a stabilization of business volumes and consumption. The reason for this is that any departure of a country from a conservative to a more radical form of political control over economic life is the occasion

for a flight of foreign and domestic capital to places of greater safety. These heavy withdrawals of funds soon embarrass the banks and the Treasury and force a departure from gold, so that such a standard cannot be maintained. A country off the gold standard may have a money unit which varies rather widely in value, with unfavorable effects upon international trade. Thus, the argument is summarized in the statement that a country must choose between a stable external currency and an unstable internal price level, or a stable internal price structure with an unstable international trade unit.

This statement is not entirely fair to the proponents of greater control of money, however, since it fails to state that a country faithfully maintaining the gold standard may have its foreign trade disturbed by foreign political and economic changes, wars and business depressions. If international collaboration is required for a successful gold standard, agreement may likewise be possible for other standards which permit a higher degree of control over the internal value of money.

The commodity standard. — The commodity standard, generally speaking, involves the substitution of a number of commodities for gold in the redemption of money. Instead of a dollar note giving the bearer the right to demand a given quantity of gold, it may be converted only into fixed amounts of a group of specified commodities. This proposal has often been ridiculed. Critics picture a wage earner who, after presentation of his money for redemption, proceeds home with a wheelbarrow loaded with a few pounds of coal, some kindling, a cabbage, three eggs, a sock, a baseball bat, etc.

The following example of the likely operation of one type of commodity standard has been given by Gilbert N. Lewis, who, for illustrative purposes, selects wheat, cotton, iron, and silver as his multiple monetary standard. Suppose a one-hundred-dollar note represents the equivalent in value of a fixed number of pounds of wheat, cotton, iron, and silver. The holder of the note on presenting it for conversion would receive four warrants, entitling him to receive a fixed number of pounds of the four commodities. The monetary value of these four warrants would always be one hundred dollars, although the market prices of the warrants would vary from time to time.

The final mechanics of the system are described by Lewis as follows:

It remains to provide for the conversion of the individual warrants into the corresponding commodities, and *vice versa*. A bank established by the Government, or under the supervision of the Government, would presumably act as the medium for these exchanges. The bank itself need not handle the commodities for which the warrants are issued, but might give in exchange for a warrant an order upon some reputable firm, for which it would pay the current rate quoted on the Exchange. Thus a person presenting ten wheat warrants to the bank would receive an order for 10 X A pounds of wheat upon some member of the local Wheat Exchange; and a person wishing to sell 10 X A pounds of wheat would receive therefor ten warrants purchased from the bank at the current rate.²

Such a system of monetary redemption would have few advantages over the gold standard, and would also be very cumbersome. Other proposals for a commodity standard have the advantage of greater simplicity of operation in that they provide for the translation of the money into the multiple unit, or the multiple unit into money, by the aid of a compiled table of prices. If, at a particular time, \$1,000 would have bought the quantity of the various articles listed, and if five years later, owing to an increase in national productivity, the quantities of these same articles could have been purchased for \$960, then all public and private obligations, negotiated in terms of such a standard, could have been liquidated for \$960 for each \$1,000 of contracted indebtedness. Or in simpler terms, the value of the debt would have been changed to conform to changes in the value of money, thereby eliminating the injustice between debtors and creditors arising from a variable price level.

The compensated dollar. — Professor Irving Fisher, of Yale University, has done more than any other economist to advocate the cause of stable money and to offer proposals for its establishment. One of the earliest of his suggestions is designated the compensated dollar. The stabilization of the dollar under this plan would be accomplished by making money convertible into gold bullion dollar certificates instead of coins. Such a standard would be in all respects similar to the British gold bullion standard, which has been discussed earlier, except that the price of gold would no

² Lewis, Gilbert N., "A Plan for Stabilizing Prices," *The Economic Journal*, Vol. XXXV, 1925, p. 44.

longer be fixed legally at \$20.67 or \$35 per ounce. Instead of redeeming the money in a fixed *weight* of gold, it would be redeemed in an amount of fixed value. The guide for the administration of such a policy would be an index of prices for a group of standard commodities. For example, if the average of this list of prices changes and either more or fewer dollars are required to purchase the products, then the weight of gold corresponding to a dollar is changed. Thus, when prices rise, that is, during a period when the purchasing power of the dollar falls, the gold content of the dollar is increased by a percentage equal to the change in the value of the dollar. The dollar, being redeemable for more gold, would force the level of prices back to the desired position.

Criticisms of commodity standards. — Without denying that money has been, and can be, a very disruptive force at times, it is questionable whether the proposals reviewed, or others of the same general implications, could stabilize prices to the degree claimed by their defenders. In the first place, all such schemes face a difficult problem in the determination of an adequate index with which to guide the monetary control. Most students will concede that construction of price indexes is, at best, a difficult task. But when such numbers are to become the criteria for discretionary control over the supply of money, even greater precision is required in the measurement of change. Changes in the types and importance of various goods frequently are gradual, making it difficult to keep the index up to date.

Second, in the case of the plan for the compensated dollar, prices are assumed to be responsive to changes in the price of gold. A variation of 3 per cent in the gold content of the dollar is expected to produce an immediate and specific change in the level of prices. While such a relationship between the quantity of money in existence and the quantity of gold held by the banks and the Treasury may have prevailed at times in the past, it is now too variable to form the basis for the control of price levels. The increased use of bank deposits as a means of payment has weakened this relationship, therefore, effective control of the quantity of credit promises to be more fruitful than control through changes in the gold content of the money unit.

Third, in most attempts at monetary stabilization, control is exercised after the change in price rather than in anticipation of it.

This fact makes possible some variation of the price level and, if the monetary authority fails to analyze correctly the causes of the price change, such variations might become fairly large.

Fourth, internal monetary control must provide a means for international exchange, for no country is economically self-sufficient. Among totalitarian states this situation is taken care of by means of barter agreements. It is more difficult to handle when monetary stabilization must operate in a system of free private enterprise. Changes in real costs, speculation in international securities, capital movements, and intermittent export surpluses, all greatly complicate the tasks of internal monetary stabilization.

Despite these hindrances to effective monetary control for the stabilization of prices, there remains the problem of unstable money value. Few students would deny that the value of money could be stabilized if sufficient power were granted to a monetary authority. But there would be wide disagreement as to how much power would be required, or, with regard to schemes for automatic regulation, as to how effective they would be in stabilizing prices. It is probable that our public policy on the question will continue in the future, as it has in the past, to be opportunistic because changes in political conditions and in public sentiment periodically alter our ideas of what we want and how much we are willing to give for it. The growing control of national states over the lives of their citizens indicates that the world may witness, in the future, a monetary control which does alleviate much of the disorganization resulting from highly unstable prices.

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CHAPTER III

MODERN MEDIA OF EXCHANGE

Introduction. — The description of various money systems given earlier has introduced the concept of credit at a number of points, that is, reference has been made to both money and credit, rather than to money alone. This has been done because under modern conditions of exchange, certain credit instruments are more frequently employed in making payments than is formal money. When offered in payment of a debt and accepted by the creditor, such credit instruments discharge obligations in the same manner that standard money does. These particular forms of credit may, therefore, be classed as money, since they conform to the requirements of the definition previously adopted.

Since all credit instruments are not used to discharge obligations, introducing a discussion of them here must be defended on other grounds. Such a discussion is necessary because a knowledge of the operation of modern credit and money requires an acquaintance with the credit forms utilized by financial institutions. Acquaintance with these forms not only includes familiarity with the various types of instruments but also the ways in which they are used and the customs and laws which affect the sale and ownership of them.

Credit and the shifting of claims. — Modern financial institutions dealing in credit instruments make possible a coordination of the means of payment which is the outstanding characteristic of modern exchange. Two significant features of this coordination may be noted: First, claims are made readily shiftable from one holder to another; and second, the creation and cancellation of claims are simultaneous and continuous processes.

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The existence of markets for credit instruments such as bonds, capital notes, acceptances, and commercial paper provides a way for any individual to acquire or dispose of these claims at any time. These markets make individual and institutional investors more willing to lend their funds since it is possible to regain them without waiting until the maturity of the loan. The great volume of daily

trading in bonds, for example, is evidence of the shifting of claims from one group of holders to another. These sales of bonds reflect an exchange of bank balances and bonds. Falling bond prices indicate the reluctance of holders of bank balances to exchange bank balances for bonds at the former prices, and rising prices reflect the opposite.

The second feature of the modern credit system is the simultaneous creation and cancellation of claims. This characteristic parallels the system of production in industry where goods are continuously started through the processes of fabrication by any one firm and continuously taken from them for sale to other firms and the public. If the volume of production were constant, there might be less need for banking services. Since the quantity of output varies, the increases may be financed by a bank loan. The producing firm may borrow to enable it to fill an increase in its orders. The goods may be sold to a firm which borrows to pay for them, thereby releasing bank balances to the producing company with which the original loan can be cancelled. In actual practice, this example is multiplied many times and the transactions are started at different dates and are extended over variable time periods. The credit system in creating and cancelling balances is simply reflecting the endless process of production in which goods start as raw materials, and after passing through various stages of fabrication, are delivered to the consumer.

Credit forms that approach the status of money. — The most widely used credit form that has attained the status of money is the demand deposit at a bank and the check which is used to transfer the deposit. The check differs from other credit instruments in that, when it is given in payment of an obligation, the transaction is completed, provided, of course, the bank honors the check. If a promissory note is given in payment for a bill of goods, the time at which payment must be made is deferred. At the maturity of the note, settlement in formal money or a bank check is necessary. The principle upon which the distinction is based is this: If the credit instrument given in payment effects a final settlement of an obligation and is in general use for such purposes, it has attained the status of money.

Under this principle, it would be possible for the promissory note to become money in the following manner: Suppose that Smith,

whose credit is well known in the community, buys land from Brown and gives his promissory note for \$5,000 in payment, and suppose that the note is payable in one year. Brown may then buy farm equipment costing \$5,000, giving Smith's note in payment, providing the seller of equipment is willing to accept it. The distributor of farm equipment also may use the note for buying goods, and the note may continue to circulate in the community until redeemed at maturity by the maker, Smith. All transactions except the final payment would have been accomplished without the use of money. If such methods of payment were general in a community, promissory notes in that area would become money. This usage is not general in modern society but it is given here to illustrate the way that practices in making payments confer the status of money upon credit instruments which have previously been considered only deferments of payments. There are two disadvantages to such a practice: First, the promissory note bearing interest requires that interest be computed at each transfer; second, the note having a maturity date requires that it be presented for redemption at a stated time. In these respects, the promissory note differs from all forms now used as money. These characteristics would probably prohibit its use as money at any time.

Another kind of transaction in which credit instruments alter the method of payment for goods occurs in foreign trade. Suppose that merchants in the United States bought a million dollars' worth of goods from English manufacturers and that English merchants purchased the same amount from American manufacturers. One way that payment could be made would be for the American merchants to ship enough gold to settle their accounts, and for the English to do likewise. This wasteful method is avoided by the intervention of the bill market. In effect, American exporters are paid by Americans who owe English exporters, and English exporters are paid by Englishmen who owe American exporters. The English and American bill markets and banking institutions bring together the demands for a means of payment in each country. The final settlement is made by bank checks. The bill market has simplified the procedure, thereby making payment in such manner possible. In this instance the credit instrument, although it has not served as money, has made it possible for another instrument to do so.

DEVELOPMENT OF THE USE OF CREDIT

Two distinct types of changes are constantly taking place in the evolution of credit: (1) There is a gradual increase in the total amount of exchange settled through the use of credit instruments, although there are periodic setbacks in this trend during the liquidation phase of the business cycle; and (2) new types of credit instruments are developed as the financial system adjusts to the requirements of new business and economic conditions.

The increased use of credit instruments is due to their greater convenience than currency in the settlement of obligations. Credit instruments also possess certain qualities similar to those of currency. For either currency or credit instruments to be used widely, there must be public confidence in their redeemability in an acceptable commodity or in their acceptance in exchange for goods and services.

When coins were first circulated, they contained metal of the same value as the amount stamped on their face and were generally examined to see that they measured up to this standard. Later, paper money came into use in lieu of metals because the public had confidence in the issuing institutions. This confidence was based not only on the redeemability of paper money in metal, but also on the assurance that it would not be issued in such quantities or in such manner as to cause it greatly to depreciate in value. It should be remembered, however, that money, whether coins or paper, has not always been managed with the greatest prudence. The above conditions have only existed where the best results have been obtained.

Finally, the establishment of deposit banking and the expansion of the institutions for clearing checks made it possible for checks to assume the role of money, in which case the public trusted the ability of the banks to redeem the checks when presented for payment, and trusted the drawer to maintain a sufficient balance at a bank. But the development of general use of the check required other changes since it was far easier to determine the credit standing of a government than of a myriad of banks, corporations, and individuals. The elements which made possible the circulation of checks are varied. The most important of these are: better sources of information for verifying facts concerning credit conditions;

improved communication through which credit data can be transmitted readily; better methods of analysis for studying financial strength and weakness; and the standardization of credit and legal procedures making simpler the recognition of rights with respect to credit instruments.

In times of economic crisis and panic, confidence wanes and the money practices of the public revert to primitive methods. This fact is observable in the way that hoarding first assumes the form of holding deposits in banks as business turns downward from a boom. As conditions grow worse and the strength of the banks is in doubt, paper money, rather than deposits, is hoarded. Finally if the banking system and Treasury show signs of being unable to redeem the paper money in gold, the public rushes to secure metal in order to hoard it. But this reversion to primitive customs is not long maintained. The slow evolution of the credit system is soon resumed.

Characteristics common to money and credit. — In a highly developed credit system, three of the characteristics of money are also the characteristics of credit: (1) The credit must be generally acceptable; (2) institutions for the redemption of the credit must exist; and (3) recognition of the credit must be relatively simple and easy. Acceptability of credit instruments is facilitated by custom, by laws against the issuance of checks without funds for their payment, and by the appraisals of credit ratings afforded by services established for such purposes. The part played by custom is evident in the wide acceptance of checks in payment simply because of the relatively small number of times that checks are repudiated by either the drawer or the redeeming institution. Laws prohibiting the issuance of "cold checks" have aided in developing faith in the redemption of checks and therefore expedited their use. Finally, when a check is circulated in an area far removed from the residence of the issuer, it is necessary that there be a means of determining the credit standing of the issuer and of the bank upon which it is drawn. This service is provided by companies which specialize in credit ratings.

Even though these conditions are present, checks cannot circulate unless there are institutions through which they can be presented for payment. A person in a frontier section would be reluctant to accept a check because of the difficulty of transforming it into

a usable and acceptable form in his community. A similar condition makes the use of checks in foreign trade a cumbersome method of payment. While institutions for check collection are available in foreign countries, the use of the personal check would be more cumbersome than payment by means of bank drafts.

The process of recognizing the legal status of credit forms has been made easier since the legal procedures which define the rights of the parties to a credit instrument have been standardized. This codification by means of the uniform negotiable-instruments law has made it simpler for a holder of a check to understand his legal rights and obligations. If it were possible for each check to have a slightly different legal status from all other checks, such instruments would pass in exchange only after the most careful scrutiny, and the time consumed in investigation would forbid their general use.

Superiority of a credit system over currency. — While credit does not possess all the qualities of formal money, nevertheless it has come into a position of prominence in the modern system of exchange because it is superior in certain respects. In many situations, a credit instrument is preferred to formal paper money or metal because: (1) Its loss does not reduce the amount of economic goods as would be the case if gold were lost; (2) payment may be directed to a specific person, thereby reducing the possibility of loss through theft; and (3) credit can be inaugurated with a business transaction and be destroyed by the completion of the transaction, thus adjusting itself to the requirements of different situations.

The shipment of checks does not involve the risk of loss which is true in the case of paper money. If checks are stolen or are lost through fire, the drawers of the checks can stop payment and issue new instruments with little inconvenience. Chances of recovery are less likely when paper money is stolen. If it is destroyed by fire, the government requires proof of the loss and a deposit for a period of time to guarantee repayment in case the money is recovered and returned to circulation. Similar advantages of bills over metallic money exist in international trade when the metal is shipped. If the metal is lost, the individual is compensated by the insurance company, but society suffers a permanent loss of wealth. Furthermore, the use of credit instruments enables the

businessman to hold a part of his wealth in a liquid form, which is most convenient.

The third and probably the most significant characteristic of credit is its amenability to the demands of trade. Since credit instruments relate to specific transactions, they can be drawn to suit such requirements of the individual case as maturity, collateral, place and method of payment, and form. Moreover, they may be expanded in volume as required by the needs of trade and industry. These characteristics, while descriptive of formal money to some extent, more truly describe credit instruments.

It can be fairly well established that the inflexibility of money, in the face of rapidly expanding trade, has stimulated the use of credit forms in making payments. In England, the passage of the Bank Act of 1844 limited the note issue, above a fixed amount, to the quantity of gold held by the Bank of England. This limitation encouraged the use of checks because it was difficult under it to get enough gold to supply the demands for currency. The same type of regulation occurred in the United States in 1862 when the note issues of the banks were required to be backed by government bonds. A decline of the government's bonded indebtedness forced a reduction of the circulation, without regard to the requirements of business. These conditions in England and the United States forced the banks to organize their funds with a maximum of efficiency.

Other requirements of a credit system. — In comparing money and credit and the conditions conducive to their use, certain requirements of a credit system have been indicated. These requirements have included not only those instruments which perform monetary functions but also the general circumstances which foster the development of the banking system. Since the use of deposits as money is dependent, in part, upon the availability of bank loans, conditions which influence the loan process are closely related to the use of checks as a means of payment.

In addition to those which have been mentioned, other somewhat more pervasive but less apparent conditions must prevail for a credit system to function satisfactorily. Most important of these conditions is the maintenance of well-developed markets for commodities, securities, real estate, money, and foreign exchange. By well-developed we mean that quotations should be continuous,

so that the spread between successive sale prices and between bid and asked quotations will be small. Furthermore, these markets should have a large number of buyers and sellers, in order to assure a substantial volume of sales, thus permitting credit institutions to buy or dispose of large quantities of the objects traded without raising or lowering prices unduly. Only if these conditions exist can the specialist in credit instruments accurately determine the value of collateral offered to him or be assured that the collateral accepted will be salable with little or no loss. Such conditions make possible the reappraisal of instruments as the supply of and demand for credit ebbs and flows through the markets.

A second condition necessary to a credit system is that it should have a variety of credit instruments which will permit adjustment of credit to specific transactions. There are several aspects to such adaptability. First, these instruments should be flexible from the standpoint of maturity, since the length of time required to process goods varies from one industry to another. Some producers are able to purchase raw materials, fabricate goods, and distribute them to the consumer within a thirty-day period while others may need from six to nine months for these processes. The opportunity to vary the maturity of instruments makes it possible to accommodate both types of production. Second, flexibility is necessary with respect to the kind of business, in order to fix the rate of interest paid in accordance with the risks involved. Industries in which risk is small should be charged a lower rate of interest than those in which failure is more likely to occur. Further adjustment is possible in connection with manner of payment, place of payment, and kind of security offered as a guaranty of payment.

Types of credit instruments. — Credit instruments vary much more extensively than the following treatment of instruments indicates. The following classification is presented for contrast rather than completeness:¹

- I. *Investment credit instruments*
 - A. Bonds and debentures
 - B. Capital notes
 - C. Other miscellaneous forms

¹ An excellent outline of investment credit instruments may be found in Moulton, H. G., *Financial Organization and the Economic System*, pp. 107-108. New York: The McGraw-Hill Book Company, 1938.

II. *Commercial credit instruments*

A. Open-book accounts

B. Promissory notes

1. Ordinary bank notes
2. Commercial paper sold in the open market

C. Bills of exchange

1. Demand bills, for example:
 - a. Bank checks
 - b. Demand drafts of other types
2. Time drafts or bills, for example:
 - a. Bankers' acceptances
 - b. Trade acceptances

D. Other miscellaneous forms

1. Trust receipts
2. Warehouse receipts
3. Bills of lading

COMMERCIAL CREDIT

The chief difference between commercial credit and investment credit lies in the length of time each type takes to mature. Investment credit instruments are long-term and are sold to acquire funds to purchase buildings, equipment and other assets that will yield returns over a long period of time. Specific assets of this type are roadbeds, stations and rolling stock of railroads, generating equipment and transmission lines of public utilities, schools and roads of the government, and houses of consumers. With regard to all of these, return of the value invested is possible only by continued use of the materials for a number of years. Loans for the purchase of such assets must be made by individuals or institutions capable of waiting for the return of their capital, or the instruments must be transferable from one holder to another in order to divide the period of waiting.

Commercial credit, on the other hand, is for short periods only, usually less than one year. Credits so designated are used for pay-rolls, acquisition of inventory, purchase of small tools, fuel, and all other expenses of a short-term variety. Such credits should mature when the assets in which the funds have been invested are sold. To illustrate, suppose commercial credits are granted to a

manufacturer to finance the sale of goods on open-book accounts. If the terms of such sales are thirty days, credits granted for this purpose should not exceed thirty days. If the funds had been employed in buying raw materials, then the credit term should have conformed to the time required for processing them and selling the finished goods.

Open-book accounts. — One of the oldest forms of credit instrument is the open-book account, which contains a succession of postings of sales. Such postings may state the date of sale, the description of the goods sold, and the amount of the sale. Some would not classify this account as a credit instrument, since there is no formal evidence of the obligation of the debtor to the creditor. In case the debtor fails to pay, the creditor has only his ledger account with which to prove that a sale actually has occurred. The courts have usually required proof that the debtor received the goods, a requirement often difficult to meet.

Although this method of deferred payment has been in use throughout the history of commerce, the uncertain status of such claims stimulated the development of other more satisfactory forms in which the debt is clearly stated and recognized. In Rome, the first step in this direction took place when the buyer was asked to swear to his receipt of the goods. Modern usage has never required this step.

Despite the weaknesses of the open-book account, a great volume of goods is sold on this informal plan. Some diminution in the use of open-book accounts has resulted from the increased distribution of goods through chain stores, mail-order units, and supermarkets where sales are for cash only, or where, if deferred payment is permitted, other evidence of indebtedness is required. However, open accounts are still prominent in wholesale and retail trades as well as in banking. In the latter, the open account is used to record the debt of the bank to the customer, and the customer is permitted to examine his account periodically in the form of a duplicate of the bank's record.

In most instances, the extension of credit on open-book accounts has been based upon analysis of the history of the debtor's credit. If he meets his obligations with a reasonable degree of promptness, and if he does not ask for credit beyond his known ability to pay, requests for a charge account are usually granted. The accumula-

tion and dissemination of information about credit ratings are performed largely by local associations of credit men and by Dun and Bradstreet.

In the past decade the small demand for other types of loans has led financial institutions to compete in extending loans with accounts receivable as collateral whereas in former years they did not regard such collateral as sound. When loans are made in this manner, collections of the accounts receivable are handled by the company which sold the goods so that the customer is never aware that his account is used as security for a loan.

Promissory notes. — The second major classification of commercial instruments is the promissory note — an unconditional promise, in writing, signed by a maker, to pay, in the United States, at a fixed or determinable future time, a sum certain in dollars to order or to bearer. There are two distinct advantages of such an instrument over an open-book account. It affords a clear statement of the obligation of the debtor which makes proof in a court of law unnecessary; and by being in writing, it is more readily transferred from one individual to another.

The most general use of the promissory note in the United States has been in the fields of finance and banking. It affords an admirable instrument in these institutions where the borrower is frequently unable to meet the requirements of financing through bills of exchange. It is interesting to observe that European banking has favored the use of the bill of exchange while, to a large extent, American banking has employed the promissory note. This development in the United States was fostered by the large number of small banks whose typical activity was the accommodation of small local enterprise. In addition to its regular use in banking, the note also serves in a variety of unstandardized exchanges between individuals and firms. It is, therefore, difficult to estimate the amount of trade actually financed through its use.

While the form of the promissory note is standardized, as was indicated in the legal definition stated earlier, it is quite adjustable to the needs of individual cases, and can be modified to meet different economic conditions and to suit individual borrowers. Since the rating accorded to the credit of firms varies from one enterprise to another, lending institutions must adapt their instruments to changing conditions. With regard to the promissory note,

adjustment takes place by varying the requirements concerning collateral, cosigners, and guarantees. Certain types of business, mainly financial institutions, are able to offer salable stocks and bonds as collateral in order to secure a loan, and retailers may be able to hypothecate inventory or accounts receivable, but a service garage, having no property to offer, may be required to secure one or more cosigners. The cosigners agree to pay the obligation in case of default by the borrower.

When paper is drawn to be sold in the open market, further variations occur in the note to meet specific conditions. When an individual borrows at a bank, he makes a promise to repay the

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\$ <u>1,000.00</u>	<u>Los Angeles</u>	<u>CALIF.,</u>	<u>July 23</u>	<u>19 40</u>
ON <u>October 21, 1940</u>				
FOR VALUE RECEIVED, I PROMISE TO PAY IN LAWFUL MONEY OF THE UNITED STATES OF AMERICA,				
TO THE ORDER OF THE <u>Bank of America</u>		<u>7th & Spring Streets</u>		BRANCH IN
THIS CITY <u>ONE THOUSAND AND NO/100#</u>		<u>.....</u>		DOLLARS
WITH INTEREST IN LIKE LAWFUL MONEY FROM <u>.....</u> date <u>.....</u> AT THE RATE OF <u>six</u> PER CENT				
PER ANNUM UNTIL PAID, PAYABLE ON <u>October 21, 1940</u> AND <u>monthly</u>				
THEREAFTER, AND IN ADDITION HERETO IN THE EVENT OF COMMENCEMENT OF SUIT TO ENFORCE PAYMENT OF THIS NOTE, SUCH ADDITIONAL AMOUNT AS ATTORNEYS' FEES AS THE COURT MAY ADJUDGE REASONABLE.				
ADDRESS: <u>1000 No. First St.</u>		<u>Elmer S. Hall</u>		
TELEPHONE: <u>EX 4112</u>		<u>.....</u>		
<u>90 days</u>		<u>.....</u>		

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FIG. 1. THE PROMISSORY NOTE

bank the amount borrowed, but when the paper is to be sold in the open market, it is drawn as a promise to the maker himself and then endorsed in blank. This method makes it possible for the promissory notes to be taken by a commercial house and sold to a customer without the paper house accepting by endorsement an obligation to redeem them if the seller of the paper should default.

Bills of exchange.—Bills of exchange constitute another category of commercial credit instruments, and regardless of the variations found among the different types of bills of exchange, they are “unconditional orders in writing addressed by one person to another, signed by the person giving it, requiring the person to whom it is addressed to pay on demand or at a fixed or determi-

nable future time a sum certain in money to order or to bearer." Promissory notes and bills of exchange are with respect to their legal aspects alike, except that bills are orders to pay while notes are promises to pay. From an economic standpoint, however, they serve under different circumstances and for different purposes. A variety of terms are used in designating the bill, depending on the circumstances under which it is drawn — demand and time drafts, domestic and foreign bills, documentary and clean bills, and commodity, finance, or accommodation bills.

In the case of demand and time bills, the qualifications refer to the term of payment. A demand bill is due at the moment of

<i>No Protest</i> <i>Return at once if not paid at maturity</i>	\$	Hamilton, Ohio, _____ 193__
	Pay to the order of	
	<i>The First National Bank and Trust Company</i> <i>of Hamilton, Ohio</i>	
	_____ Dollars	
	<i>Value received, and charge the same to account of</i> <i>To</i> _____	

FIG. 2. THE DOMESTIC SIGHT DRAFT

presentation to the person on whom it is drawn, while a time bill becomes due only after the passage of an interval, usually more than thirty days and less than nine months. Domestic bills are drawn to finance the movement of goods within the country, while foreign bills are employed in the movement of goods between countries. The home country may not be involved in the transfer. Bills to which are attached documents carrying title to the goods shipped are called documentary; bills without such documents are clean. Finally, if a bill is drawn to finance the movement of commodities, it is called a commodity bill; if drawn to provide financial accommodation, it is called a finance bill.

The origin of the bill of exchange is uncertain. It is known to have been used in transactions in ancient Egypt, although it did not attain commercial importance until the development of trade during the medieval period. The expansion of commerce, espe-

cially in Italian cities, stimulated the development of credit instruments of all types. They were particularly useful where a transfer of funds was desired without the attendant risk of loss through banditry or piracy. Further improvements have come in more recent times as the bill has been adapted to modern conditions.

The bank check. — The most common form of bill of exchange is the bank check, which is used to evidence a change in the ownership of a bank deposit. The check is a demand bill since it is payable upon presentation to the bank upon which it is drawn. Upon being presented, the holder may be given a credit on his account or may ask for redemption in currency. If the bank upon which the

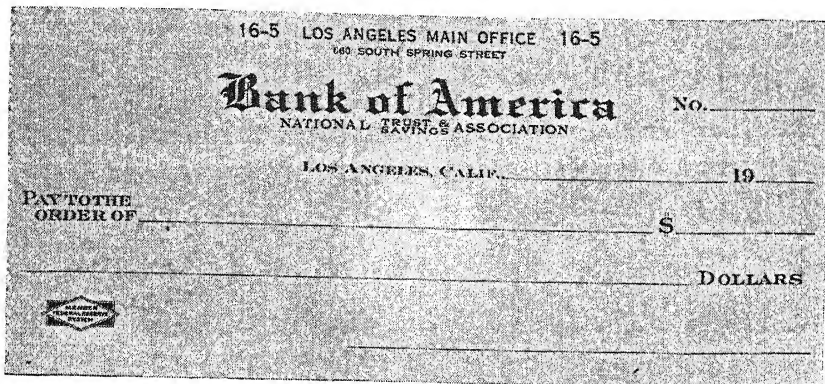


FIG. 3. THE BANK CHECK

check is drawn should fail after ample time for collection had elapsed, the holder of the check would suffer the loss.

Frequently, checks are presented to banks other than the one on which the check is drawn. These collecting banks are under no obligation to deliver the funds to the payee until they have had sufficient time to secure the funds from the paying bank. In periods during which funds are abundant, however, the collecting bank will pay the funds to the customer before collection is completed. This transaction really amounts to a loan without interest for a few days, unless the bank charges for the service.

Forms of bank checks other than the customer's bank check are the *cashier's check*, the *certified check*, and the *traveler's check*. A cashier's check is drawn by the cashier of the bank on his own bank and is customarily used to pay the bills of the bank. Occasionally these checks are purchased by individuals who do not have bank accounts,

and are used in making payments where their credit is unknown. The certified check is an ordinary bank check drawn by a bank's customer and certified by an officer of a bank. Certification is a statement on the face of the check indicating that the drawer has funds on deposit equal to the face value of the check. In order to be assured of this, the account of the drawer is immediately debited. In case the bank should fail before the check is presented for collection, the drawer is not relieved of the obligation, providing the check has been presented without delay. Traveler's checks are issued by large organizations having well-known credit standing

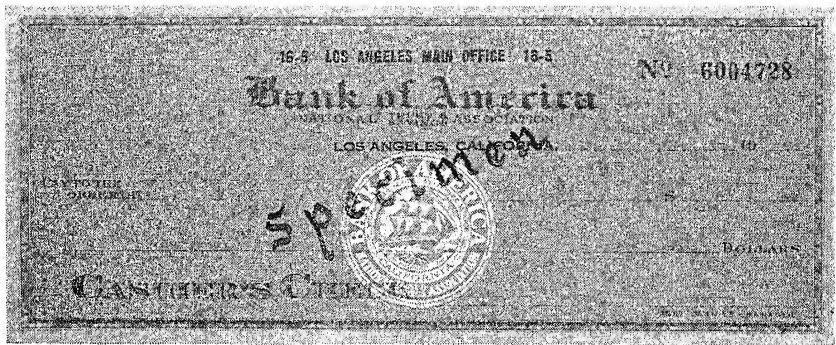


FIG. 4. THE CASHIER'S CHECK

and a large number of branches or cooperating members, for example, express companies, bank associations, and large single banks. Bank checks are issued in various denominations — \$5, \$10, \$20, \$50, and \$100. They require two endorsements by the holder; one at the time he purchases them and another when the check is presented for cash. They afford the protection of a checking account and are readily exchanged for cash at any of a number of centers.

In addition to the aforementioned credit instruments, bank drafts — an order drawn by one bank upon its correspondent — are frequently used. Such drafts are often sold to customers as they are accepted practically everywhere in cash payment without question. They constitute a rather important means of making payments to places far away.

Bankers' acceptances. — Two types of acceptances, namely, bankers' and trade bills are in general use. The difference between

them is the type of acceptor or accepting institution which guarantees their redemption. When the bill is drawn on a bank, it is designated a banker's acceptance; when drawn on any other type of business, it is called a trade acceptance. The manner in which bankers' bills come into existence is as follows: A customer, wishing to purchase goods from a distant manufacturer to whom his credit is unknown, applies to his bank for a commercial letter of credit. Such a letter, which may be revocable or irrevocable, is an authorization from the proper officers of the bank, addressed to the firm from which the goods are to be purchased, stating the bank's willingness to be drawn upon for a stated number of dollars. The



FIG. 7. THE BANK DRAFT

buyer then sends the letter of credit and his order for goods to the manufacturer. Upon receipt of this order and the authorization to draw upon a bank for payment, the seller fills the order, delivers it to a common carrier, and receives therefrom an order bill of lading. The bill of lading and the letter of credit are then presented to the seller's bank and a draft or bill is drawn upon the institution which issued the letter of credit. The amount of the bill corresponds to the value of the goods shipped if the draft is payable upon presentment. If, however, the bill is payable at a later date, for example at the end of ninety days, the face of the bill contains an allowance for discount, or for loss of interest. Since no interest rate is stated on these bills, the amount for which they will sell in the market will be lower than the face value by an amount equal to the interest on this type of credit instrument.

The bill and the bill of lading are forwarded to the issuer of the

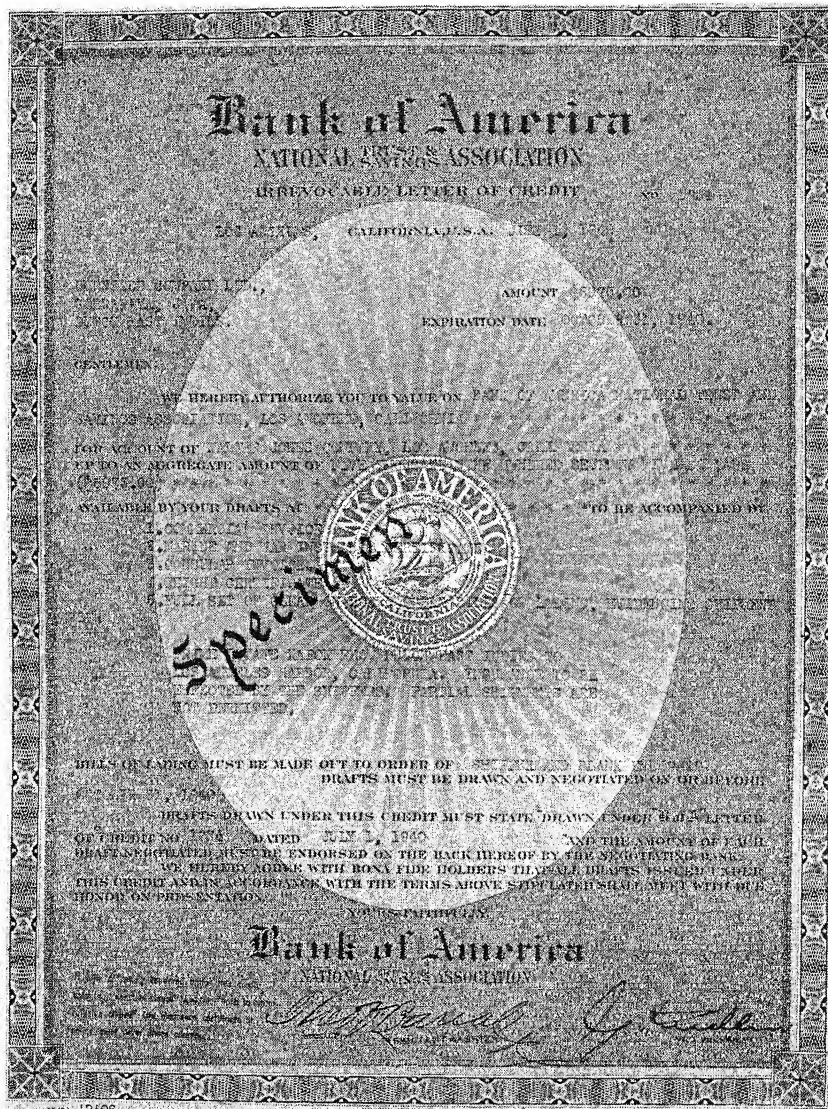


FIG. 9. THE COMMERCIAL LETTER OF CREDIT

letter of credit for acceptance. The accepting bank stamps "accepted" across the face of the bill and it is then signed by the proper officer, and returned to the bank from which it was drawn. The drawing customer may hold the bill until its maturity or may

have his bank sell it in the open market. Only rarely are the bills of any except the larger banks offered in the open market.

The accepting bank notifies its customer of the arrival of his bill of lading. If the credit of the customer is doubtful, the bank may require him to execute a trust receipt, by which title to the goods is retained by the bank. The customer receives possession of the goods

TRUST RECEIPT UNDER COMMERCIAL LETTER OF CREDIT

LOS ANGELES, CALIFORNIA, JULY 15, 19 40

Received, upon the trust hereinafter mentioned, from BANK OF AMERICA N.T. & S.A., LOS ANGELES
the following documents and the goods and merchandise represented thereby,
all the property of the said bank and specified in the bill of lading as follows:

DATE	VESSEL	MARKS AND NOS.	MERCHANDISE
TIENTSIN, JUNE 10, 1940	ASAMA MARU	(A-Z) NO. 1/AO LOS ANGELES	10 BALES RUGS
DOCUMENTS ATTACHED:	COMMERCIAL INVOICE, CONSULAR INVOICE, INSURANCE CERTIFICATE AND 4/4 BILLS OF LADING		

and in consideration thereof, undersigned hereby agrees to hold said goods in trust for said bank and as its property, with authority to sell the same for its account and immediately deliver the proceeds of said sale to said bank, but without authority to make any other disposition whatsoever of said documents or the goods or merchandise represented thereby, or any part thereof or any of the proceeds thereof, either by way of conditional sale, pledge, mortgage, transfer, or otherwise.

In case of sale, the undersigned further agrees immediately to deliver the proceeds as soon as received to the said bank to apply against the 3/4 acceptance of BANK OF AMERICA N.T. & S.A.
MATURING AUGUST 14, 1940
for TWO THOUSAND THREE HUNDRED AND 50/100 DOLLARS
Dollars (\$ 2550.00) under the terms of Commercial Letter of Credit No. 1248, dated
APRIL 10, 1940, issued for the account of the undersigned and for the payment of any other indebtedness of undersigned to said bank.

Undersigned agrees to keep said goods insured to their full value against fire; the sum insured to be payable in case of loss to the said bank or its nominee, with the understanding that said bank is not to be chargeable with the storage, premium of insurance, or any other expense incurred on said goods.

Undersigned further agree that no failure or omission on the part of the undersigned fully to carry out any of the provisions of this or any similar receipt or agreement, or of the agreement under which the said bank issued the Letter of Credit under which said documents and the goods and merchandise represented thereby were purchased, shall be deemed a waiver by the said bank of any of its rights or remedies under either of said agreements, unless said waiver shall be in writing endorsed hereon and signed by the said bank.

The said bank may at any time cancel this trust and take possession of the documents and/or the goods and merchandise represented thereby, or the proceeds of such as may have been sold, wherever said goods or proceeds may then be found; and in the event of any suspension or failure or assignment for the benefit of creditors on the part of the undersigned, or of the nonfulfillment of any obligation, or of the nonpayment at maturity of any acceptance made by undersigned under said credit or under any other credit issued by the said bank on account of the undersigned or any indebtedness of the undersigned to the said bank all obligations, acceptances, indebtedness and liabilities whatsoever shall thereupon, with or without notice, mature and become due and payable.

In the event that the value of the documents hereinabove mentioned or of the goods and merchandise represented thereby shall depreciate in value, the undersigned agrees either to pay to said bank in cash the amount of said depreciation or deliver to said bank other documents and/or goods or merchandise represented thereby of the then market value equivalent to said depreciation.

A-Z TRADING COMPANY

BY *[Signature]*

under this arrangement, acting as an agent of the bank. This plan protects the bank in case the enterprise should fail while the goods are being sold. Since the bank has title, a failure does not place it in the category of a common creditor, for it can repossess the goods and sell them through another agent.

As the transaction now stands, the goods are held by the buyer; the acceptance has been sold in the market and may be held by any of a wide variety of buyers; the accepting bank has a contingent liability for the acceptance as long as it is outstanding, as well as a contingent asset in the form of the customer's liability to pay the amount of the bill plus a commission for the service. At the maturity of the acceptance, the holder presents it to his bank for collection through ordinary banking channels. Upon its delivery to the accepting bank, the draft is honored and the customer's account is charged for the amount of the bill. It is assumed that, in selling the goods, the bank's customer has been able to build up his account to a level which permits payment. Where the customer's credit is sound, this is assured; where it is not, the trust receipt will have enabled the bank to secure the necessary funds from the sale of the goods, provided they were readily salable.

The four parties involved in this procedure, whose interest must be appraised, are: (1) the buyer of the goods who employed the acceptance; (2) the seller of the goods; (3) the accepting bank; and (4) the buyer of the bill who holds it to maturity. The chief advantage of this method of finance to the buyer of goods is that he is able to secure funds at a lower rate of interest than is obtainable on loans at a bank. In view of the fact that the credit of the bank has been substituted for that of a less well-known individual, the bill sells at a comparatively low rate of discount, and the buyer of goods secures this advantage. The accepting bank derives two advantages. First, it is enabled to aid customers in securing accommodation outside of the bank when its supply of funds is limited. This becomes a disadvantage when the bank has ample funds but is unable to find borrowers. Second, the bank earns a fee for lending its credit and permitting its customers to secure a low discount rate. The buyer of the bill, while he earns only a low rate of interest on his funds, is virtually assured of repayment at maturity. Because of this, the banker's acceptance is an admirable investment for institutions having idle funds at certain seasons,

which must be available for reinvestment at a specific date. Bankers' acceptances are also widely used by banks as a form of highly liquid short-term investment. Finally, the seller of goods is able to sell on terms closely approximating cash, thereby eliminating the risks of credit losses. Owing to these several advantages of the bill of exchange over the open-book account, the Federal Reserve authorities have actively supported the market for such instruments in the hope of encouraging their wider use. The bankers' bill is used almost exclusively in the financing of foreign trade, while the use of the trade acceptance is confined to domestic transactions.

Trade acceptances. — Trade acceptances differ from bankers' acceptances in one respect. In the case of bankers' acceptances, the accepting institution is a bank. In the case of trade acceptances, the bill is accepted by a commercial firm whose credit rating is sufficiently well known in the financial markets to permit its paper to be sold advantageously. Where purchases are financed by means of trade acceptances, no bank is involved directly. If the Smith Company sells to Brown and Company under such an arrangement, Brown and Company will send its order to the Smith Company to be filled. The Smith Company then sends its itemized bill and a draft upon Brown and Company for the amount, payable in ninety days. Brown and Company accepts by so indicating on the face of the draft and returns the bill to the Smith Company. If the company is well supplied with funds, the draft or trade acceptance may be held until maturity; if not, it may be discounted at a bank. If the accepting company is well known,

TRADE ACCEPTANCE	No. _____	_____ 19__
	To _____	_____
	On _____	Pay to the order of _____
	Dollars (\$ _____)	
	<i>The obligation of the acceptor hereof arises out of the purchase of goods from the drawer. The drawer may accept this bill for any other bank, bank or trust company in the United States which he may designate.</i>	
	Accepted at _____ on _____ 19__	Bank _____
	Bank Location _____	
	Buyer's Signature _____	
	By Agent or Officer _____ By _____	

FIG. 11. THE TRADE ACCEPTANCE

the bill may be sold in the open market. The rate of interest which the bill carries is determined by the discount from its face value, since it carries no statement of an interest rate on its face.

The trade acceptance has been the object of a certain amount of misuse. Several decades ago it was extensively used as a means of collecting accounts past due. The bill was drawn without authorization from the drawee and placed with a bank for collection. When the drawee was notified of the arrival of the draft by his bank, he could choose either to accept or to reject it. But rejection was somewhat embarrassing since to do so would place the drawee in an unfavorable position with his bank. The bank might conclude from his refusal that he did not honor his drafts and would therefore regard his credit unfavorably. Since the draft was so generally used for such purposes, the implication of the arrival of a draft at one's bank was that an account past due was being collected. Businessmen were therefore reluctant to permit drafts to be drawn against them, preferring to find other methods of financing their purchases.

The Federal Reserve System has changed this precedent by exercising its influence toward the legitimate use of such drafts. Since Federal Reserve facilities formerly were available only for the financing of current needs of trade and manufacture, collection bills were denied the privilege of discount because they represented past transactions. Yet despite this encouragement, the trade acceptance has not been used to a great extent any time and, recently, has become negligible in volume. Its use is simple and economical and, at some future time when funds are more difficult to secure, it may come into more general use.

Extent and use of acceptances. — The most extensive use of the bankers' acceptance occurs in the field of foreign trade when buyers and seller are separated by barriers of language, inadequate credit information, and distance, therefore the extent that these bills are sold in the open market is generally related to the current volume of foreign trade. The volume of domestic bills outstanding fluctuates with the accumulation and sale of inventories by business firms and with the volume of other short-term transactions. An extremely easy money market and an absence of a large volume of business have steadily reduced the amount of financing carried on through this instrument. In each year since 1929 the volume of

bills outstanding has been less than in the previous year. The amount of these bills declined from \$1,732,000,000 in 1929 to approximately \$270,000,000 at the end of 1938.

OTHER MISCELLANEOUS CREDIT INSTRUMENTS

In the foregoing explanation of credit instruments, reference has been made to several kinds of documents which supplement the credit instruments described. Some of these documents are negotiable and some are not. The most important of them are the bill of lading, the warehouse receipt, and the trust receipt.

Bills of lading. — A bill of lading is a contract between a transportation agency and a shipper, specifying the receipt of the goods by carrier, and the conditions under which the carrier accepts them for transport. It further states the liability of the carrier in case the goods are damaged while in transit. Two types of bills of lading are the "straight" bill and the "order" bill. The straight bill is nonnegotiable and is simply the shipper's receipt to show the delivery of goods to the carrier. It is generally used when the buyer of the goods is to pay by some other method than a bill, for example, an open-book account. Although it is not necessary, the straight bill is usually sent to the consignee who presents it to the agent of the carrier in securing delivery of the goods. This type of bill of lading is used in making the great bulk of shipments in the United States.

When the shipper is planning to draw a draft upon either the buyer or his bank, he secures an order bill of lading, which not only evidences delivery of goods to the carrier but also carries title to the goods. This plan makes it possible for both the shipper and his bank to be protected during the entire transaction.

The draft, invoice, and bill of lading are forwarded by the shipper's bank to the buyer's bank where the title to the goods is transferred to the buyer when he accepts the draft. This method of consignment enables the shipper to secure immediate accommodation from his bank, before delivery of the acceptance, provided his credit is acceptable.

The order bill of lading is not fully negotiable for it does not contain an unconditional promise, but it is transferable by endorsement and delivery. Since such action also transfers title to the

(Uniform Domestic Straight Bill of Lading, adopted by Carriers in Official, Southern and Western Classification territories, March 15, 1922, as amended August 1, 1930.)

1st SHEET



UNIFORM STRAIGHT BILL OF LADING

(Prescribed by the Interstate Commerce Commission)

ORIGINAL — NOT NEGOTIABLE

Shipper's No. _____

Agent's No. _____

THE BALTIMORE AND OHIO RAILROAD COMPANY

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading,

at _____, 19____

from _____ the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own road or its own water line, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

(Mail or street address of consignee — For purposes of notification only)

Consigned to _____

Destination _____

State of _____

County of _____

Route _____

Delivering Carrier _____

Car Initial _____

Car No. _____

(Uniform Domestic Order Bill of Lading, adopted by Carriers in Official, Southern and Western Classification Territories, March 15, 1922, as amended August 1, 1930.)

UNIFORM ORDER BILL OF LADING ORIGINAL

Shipper's No. _____

Agent's No. _____

THE BALTIMORE AND OHIO RAILROAD COMPANY

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading,

at _____, 1933

from _____

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own road or its own water line, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

The surrender of the Original ORDER Bill of Lading properly indorsed shall be required before the delivery of the property. Inspection of property covered by the bill of lading will not be permitted unless provided by law or unless permission is indorsed on the original bill of lading or given in writing by the shipper.

Consigned to **ORDER OF** _____

Destination _____ State of _____ County of _____

Notify _____

At _____ State of _____ County of _____

Route _____

Delivering Carrier		Car Initial		Car No.	
No. Packages	DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS	*WEIGHT (Subject to Correction)	CLASS OR RATE	CHECK COLUMN	<p>Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignee, the consignee shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.</p> <p>(Signature of Consignor)</p> <p>If charges are to be prepaid, write or stamp here, "To be Prepaid."</p> <p>Received \$ _____ to apply in prepayment of the charges on the property described hereon.</p> <p>Agent or Cashier</p> <p>Per _____ (The signature here acknowledges only the amount prepaid.)</p> <p>Charges Advanced: \$ _____</p> <p>②3034a</p>

If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight."

NOTE—Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____

Shipper _____ Agent _____

Per _____ Per _____

Permanent post-office address of shipper _____

FIG. 13. THE ORDER BILL OF LADING

goods, the consignee cannot secure possession of the goods from the carrier until he has presented the original bill of lading, properly endorsed.

Warehouse receipts. — While they are not always negotiable, warehouse receipts have been generally used in recent years as collateral for bank loans, and have been traded extensively where they represented certain kinds of goods. The issuance of such receipts is usually from a warehouse which has been licensed and bonded by the Department of Agriculture of the United States. The law legalizing this procedure was passed in 1916. In it, conditions for inspection and for bonding and licensing are stated. Two types of receipts are issued by these warehouses: The nonnegotiable type requires that the goods held in the warehouse be delivered only to the person named in the bill; the negotiable type permits delivery of goods to the bearer on his order.

When used as collateral for bank loans, the nonnegotiable type of receipt is preferred. In this case, the receipt is drawn in the name of the bank which assures that the goods will not be withdrawn without its order. Furthermore, if the depositor of the goods should fail, creditors cannot secure possession of the merchandise for the satisfaction of other claims, since the goods are held in the name of the bank:

Trust receipts. — The third type of instrument employed as collateral or protection to the lender is the trust receipt. In some respects, this instrument resembles a warehouse receipt. It is employed when the buyer has satisfactory credit standing with his bank but not to the extent of an unsecured loan. Also, the warehouse receipt is valid only as long as the goods are held by the warehouse. The trust receipt permits the goods to be moved into the hands of the merchant while title is still retained by the bank. In this way the bank is protected against the failure of the borrower while the goods are being sold. A trust receipt is less valuable as collateral than a warehouse receipt because of difficulty in identifying the goods, once they have become part of the general stock of a merchant or have been partially processed by a manufacturer. But the bank may take possession of the goods at any time it sees fit, although such action will be taken only if the borrower, now the agent of the bank, shows signs of financial embarrassment.

LAWRENCE SYSTEM
A T GIBSON, PATENTED

ORIGINAL WAREHOUSE RECEIPT NO 20096

INSURED
SEE TERMS AND CONDITIONS
ON REVERSE HEREOF

Los Angeles, California DATE July 24, 1910

Received of California Canneries, Inc.
For Storage in Los Angeles, California, WARE. No. 100

FOR THE ACCOUNT OF AND TO BE DELIVERED WITHOUT SURRENDER OF THIS WAREHOUSE RECEIPT UPON WRITTEN ORDER OF
BANK OF AMERICA N.T. & S.

DEPOSITORS DECLARED VALUE FOR
INSURANCE PURPOSES AS OF THE DATE
OF THIS WAREHOUSE RECEIPT

ITEM NO.	NO. UNITS	SAID TO BE OR CONTAIN	STACK MARK	Unit Value	Extension of Unit Values
20096	CASES				
Item 1	5000	12/46 oz. Fancy Tomato Juice	311 ZIF	1.55	7750 00
Item 2	2000	24/2 Tall Fancy Tomato Juice	408 ZIF	1.45	2900 00
Item 3	3000	24/2 Tall Fancy Tomato Juice	409 ZIF	1.45	4350 00
	10000	CASES TOTAL			15000 00

LAWRENCE WAREHOUSE COMPANY

NON-NEGOTIABLE

SUBJECT TO LIEB FOR STORAGE, HANDLING, INSURANCE AND OTHER CHARGES AS PER CONTRACT AND LEAD WITH THE INDUSTRY PRACTICE. TRANSFER OF MERCHANDISE NOT COMPLETE UNLESS MADE UPON THE BOOKS OF THE WAREHOUSE COMPANY.

LAWRENCE WAREHOUSE COMPANY

PER

ITEM 1					ITEM 2					ITEM 3				
Date	Release No.	Delivered	Balance	Insurance Balance	Date	Release No.	Delivered	Balance	Insurance Balance	Date	Release No.	Delivered	Balance	Insurance Balance
			5000	7750 00				2000	2900 00				3000	4350 00

FIG. 14. THE WAREHOUSE RECEIPT

THE LAW OF NEGOTIABLE INSTRUMENTS

The establishment of a system of credit, one part of which was the development of credit instruments, was limited for a time by the absence of uniformity in the wording of the instruments and a lack of a uniform legal code which defined the rights and obligations of the parties to these instruments. The first step toward the present system of law on these matters was the establishment of mercantile courts in England where cases pertaining to commerce were tried. Later, under the guidance of Lord Mansfield, the decisions of these courts were woven into the common law. The unsatisfactory nature of this procedure was apparent: Interpretations of cases differed; confusion and lack of uniformity char-

acterized the operation of the law. In England in 1882, and in the United States in 1895, uniform negotiable instruments laws were passed under which the existing procedure was codified. Most states today operate under this law or a system closely resembling it. The following discussion deals with the original law.

Difference between negotiation and assignment. — The legal principles which distinguish assignability from negotiability are clarified in the following example:

Suppose A owed B \$100 for goods sold by B to A, or for services rendered by B for A. B has a right that A pay him \$100. A is under duty to B to pay this \$100. This type of contract right is called a chose in action. Under the modern rule, this right is transferable by the process of assignment. B may sell to C his right to collect \$100 from A. Let us suppose that A has a counterclaim against B for \$35 for any number of reasons, either that the goods sold were not as required by contract or that the contract was induced by fraud on the part of B. If so, then the right that C purchased from B would be subject to A's defense of fraud, or failure of consideration. C, the assignee, would secure no better right against A than the original right held by B, the assignor.

In the example given above, let the situation be changed, so that the evidence of debt is not a simple contract for money, but a negotiable promissory note given by A to B. Under the law merchant, the right that B now has against A is superior to the right B had as evidenced by the simple contract right. The distinguishing feature of the latter is its unique capacity of transferability. B sells the note to C. Assuming that C is a purchaser in good faith before maturity, C will get a better title as purchaser of the negotiable paper than as purchaser of the simple contract right, that is, C, as holder of right evidenced by negotiable paper, takes title free from defenses that are available against the original party to the paper.²

Requirements for negotiability. — The uniform negotiable instruments law established certain criteria by which it could be determined when an instrument or right possessed the quality of negotiability. These criteria are as follows:

Writing and signature needed. — In order to be negotiable, an instrument must be in writing and must be signed by the maker or drawer. The writing may be of any type but the signature need not be in any particular place. The signature may be in any form, printed, written, or stamped, provided it is clear that it was the intention of the party to assume the liability.

² Dillavou, E. R. and Howard, C. G., *Principles of Business Law*, pp. 156-157. New York: Prentice-Hall, Inc., 1928.

Necessity of a promise or order. — It is required that such an instrument contain a specific or implied promise to pay (in the case of a promissory note) or an order (in the case of a bill of exchange). Simple statements of indebtedness do not satisfy this condition. The statement of the promise or order must be unconditional, that is, the promise to pay is not satisfactory if payment is contingent upon the occurrence of an outside event. Since conditions which would impair the negotiability of paper may unintentionally be included, the form of certain types of security conditions has been standardized to make recognition easy.

Time of payment. — Time of payment may be made certain, either by stating the date on which payment is to be made or by stating the interval after the passage of which the obligation matures. This condition may also be met by the inclusion of a clause permitting either the debtor or the creditor to terminate the agreement at any time. Such a practice is common when call loans are made on security collateral. Some state courts have held that these loans are not negotiable when the loan may be terminated at the option of either party, yet have considered them as negotiable when the termination is only optional to the maker and not to the holder.

Payable to order or the bearer. — An instrument need not contain the exact terms, "or order" and "or bearer." They are, however, said to be the words of negotiability. Other words expressing the same thought may be substituted but negotiability is more certain where these terms are employed. Such paper passes upon endorsement. Sometimes paper is drawn to bearer or to a fictitious person such as "cash." Possession of this paper carries title without the need of prior endorsement. For example, a bank check drawn to "cash" may be presented for currency at a bank without the drawer's endorsement.

SUGGESTIONS FOR FURTHER READING

- Dillavou, E. R. and Howard, C. G. *Principles of Business Law*. New York, 1928.
Jenks, Edward. *The Book of English Law*. Boston, 1929, Chapter XXIV.
Moulton, Harold G. *Financial Organization and the Economic System*. New York, 1938, Chapters VIII and IX.
Prochnow, Herbert V. and Foulke, Roy A. *Practical Bank Credit*. New York, 1939, Chapters XIX and XX.
Steiner, William H. *Money and Banking*. New York, 1933, Chapters I, V, and VI.
Westerfield, Ray B. *Money, Credit and Banking*. New York, 1938, Chapter 9.

CHAPTER IV

AMERICAN EXPERIENCES WITH MONEY STANDARDS

Introduction. — Monetary organization is said to change from one type to another under the impact of contemporary economic events. The experience of the United States with the various standards demonstrates the manner in which a number of monetary systems have worked in practice and, at the same time, affords a perspective so necessary for an appreciation of monetary evolution. Evolution in this field may be traced in terms of contemporary problems and the effort made to resolve them.

Early episodes with paper money. — Prior to 1774, the money of the American Colonies was established on a silver basis, since England operated on this standard. However, the particular economic conditions of each colony produced rather wide differences in the values of their paper currencies in terms of standard silver coin. The scarcity of English coins led to the circulation of French, Spanish, and Portuguese coins. This scarcity of circulating media was an important cause of the issuance of paper money by the individual colonies. The depreciation of these paper issues against other money as a result of disregard for monetary principles is shown in the exchange of the Spanish dollar for 6 paper shillings in New England and Virginia; for 8 shillings in New York and North Carolina; and for $32\frac{1}{2}$ shillings in South Carolina.

Wholesale condemnation of these issues of paper money would not be fair, although some of them reached an amount unreasonable under the circumstances. An example of a successful issue was that of the Massachusetts Colony which, in 1690, printed £140,000 of paper money in the form of noninterest-bearing notes to pay soldiers for their service in the campaign against the French. These bills of credit were to be redeemed from future tax collections and carried a bonus of 5 per cent if paid into the colonial treasury. Even though they were not legal tender, they remained on a par with silver. At the time of their issue, the soldiers could not secure

more than 70 per cent of their face value, but later they advanced to par in view of this bonus provision.

Another case of a successful issue occurred in Pennsylvania¹ where an issue of £15,000 was undertaken in 1723 as a means of overcoming a depression intensified by the absence of adequate supplies of money. This money came into circulation by means of loans at 5 per cent interest, the maximum loan being £100. It is worthy of note that this issue had many of the qualities of the bank credit of modern times and was also limited in amount. Its success was due mainly to the circumstances under which it was made. These bills of credit were the result of monetary requirements and not the outgrowth of fiscally inadequate taxes.

A vastly different issue of notes occurred in South Carolina. Between 1703 and 1731, a total of £106,500 was issued, presumably to be redeemed from tax receipts. The funds were never available in sufficient quantities to redeem the bills when due, consequently they depreciated to the low point of 13 per cent of par. It should be noted that the notes were issued to supplement the revenues of the state treasury and were not related to the amount of circulating money required by the Colony. This fact, together with the amount involved, distinguished these issues from the successful ones of the other Colonies.

Issues of the Continental Congress. — A similar case of over-issue occurred when the Colonies united to fight for their independence. Their economic resources were meager; military stores were scarce; a chaotic money system existed, and no adequate tax system had been devised. The colonists disliked taxation. Furthermore, paper issues were authorized before a systematic effort had been made to finance the Revolution through sales of bonds. Early recourse to paper issues coupled with the uncertainty of tax revenues seriously limited the salability of bonds.

On August 23, 1775, the first continental currency was issued and distributed among the various Colonies according to their population. While it was understood that the Colonies were to levy taxes to cover these notes, the collections were not made. Without some possibility of their being honored by the government, there was no escape from a rapid depreciation in the form of advanc-

¹ This and other successful issues are described in R. A. Lester's excellent book, *Monetary Experiments*. Princeton: Princeton University Press, 1939.

ing prices. Up to 1780, \$241,552,380 were issued by the Congress; the individual states had issued another \$209,324,776 on their own account. The accompanying events illustrated the difficulties attending such easy methods of finance. The decline in the value of paper and the corresponding rise of prices increased the amount of funds required for the prosecution of the Revolution and led to new issues of paper money. It is only fair to state, however, that the Congress made several attempts to retrace its steps. Loan offices were established for the sale of long-term interest-bearing certificates; a national lottery with government bonds as prizes was undertaken, and only the sale of bonds abroad prevented the situation from being hopeless. The end of this period came on August 4, 1790, when the continental paper issues were funded at 1 cent on the dollar.

BIMETALLISM IN THE UNITED STATES

Bimetallism from 1792 to 1834. — In his message, "On the Establishment of a Mint," sent to Congress on January 28, 1791, Alexander Hamilton raised the question concerning the kind of money system that would be appropriate to the development of colonial trade. He considered gold superior to silver, believing it to be less likely to depreciate, yet he believed that the supply was so inadequate that it might be insufficient for the circulation, and might thus encourage the use of commodities as money. In view of this belief, he recommended the adoption of a bimetallic standard at a ratio of 15 : 1 between silver and gold. This choice was in part based upon the market ratio which, at the time, was 15.05 : 1, and in part upon the English ratio which was approximately the same, 15 : 1. It was thought that commercial relations with England would be encouraged by the adoption of a similar ratio.

The major features of the present coinage system in the United States were designated in the Act of 1792, which embodied Hamilton's recommendations. This act provided for

1. Gold eagles of \$10 (likewise half and quarter eagles) containing 247.5 grains of fine gold or 270 grains of standard metal with a fineness of 0.91667. Thus, if a one-dollar gold piece had been coined, it would have contained 24.75 grains of fine gold or 27 grains of standard metal.

2. Silver dollars containing $371\frac{1}{4}$ grains of fine silver or 416 grains of standard metal with a fineness of 0.892.
3. Subsidiary coins (half dollars, quarters, dimes, and half dimes), containing proportional parts of the dollar's silver content, for example, a dime contained 41.6 grains standard. Cent and half-cent copper pieces were also issued.
4. Full legal-tender power of both gold and silver coins.
5. Free and gratuitous coinage of gold and silver.

The new monetary system had an auspicious beginning, but by 1795, an increase in silver production and a simultaneous decline in gold production had changed the market ratio of the two metals to 15.55 : 1. Under these conditions, gold was undervalued by the American mint ratio and began to disappear from circulation by 1810. Some gold was coined but relatively few gold coins were available by 1817, so that the country was actually on a silver standard. This rapid loss of gold was mainly due to the fact that the English and American mint ratios allowed more gold for an ounce of silver than did France with a ratio of $15\frac{1}{2}$: 1, Spain with a ratio of 16 : 1, or Portugal with a ratio of approximately 15.8 : 1. Thus Spain and Portugal received the gold that was being mined, while England and the United States received the silver.

The Act of 1834. — The problem facing the United States in 1834 presented the following alternatives: (1) Bimetallism could be given a new trial at a ratio corresponding to the market values of the two metals; or (2) a monometallic standard could be established. The debates in Congress, stimulated by underlying group interests, present an interesting picture. When the bill came before Congress in 1833, a bimetallic ratio of 15.6 : 1 was proposed; this was never accepted because of certain events which had occurred in the meantime. Gold had been discovered in North Carolina and other southern states and the gold interests of these sections demanded a ratio favorable to the circulation of gold. Moreover, as we shall see later, the fight against the United States Bank was in progress, and this opposition adopted the gold issue as part of its political platform.

In establishing a mint ratio of 16 : 1, Congress was well aware that gold would be overvalued at the mint and that silver would be driven from circulation. It was admitted in the debates of Congress that "By adopting a higher ratio we shall be more certain of accomplishing our object, which is to secure for our own country the per-

manent circulation of gold.”² There is no doubt that the majority in Congress wanted a gold standard and obtained it in the guise of a bimetallic ratio of 16 : 1 which would overvalue gold and drive silver out of circulation.

The change in the legal ratio made it necessary to readjust the weights of the coins. This readjustment could have been accomplished by increasing the weight of silver coins or by reducing the weight of gold coins. The second alternative was chosen: the amount of silver in the dollar remained at 371.25 grains of fine weight; the amount of gold in the gold dollar was reduced from 24.75 grains to 23.22 grains fine weight. The effect of the passage of an act in June of 1834 (slightly modified three years later by establishing the same proportion of alloy, that is $\frac{1}{10}$, for both gold and silver coins) gave the country a ratio of 16 : 1 at a time when the market ratio was 15.73 : 1. Thus an individual could buy \$15,730 worth of gold bullion in the market and have it coined into \$16,000 at the mint. As a result, gold imports from England were so heavy as to cause grave concern for the reserves of the Bank of England. On the other hand, a silver dollar (371.25 grains) would buy 23.95 grains of gold, whereas only 23.22 grains of gold were required to make one gold dollar. As a consequence of the act, silver became more valuable as bullion than as coin and was no longer offered to the mint for coinage. Existing silver dollars were melted down and gold became the actual standard of value.

The Coinage Act of 1853. — By 1853, the market ratio of gold to silver had fallen to 15.3 : 1, as a result of gold discoveries in Australia, California, and Russia. This widening differential between the market and mint ratios accelerated the withdrawal of silver from circulation. For all practical purposes, it might be said that the United States had been on a gold standard since a few years after the passage of the Act of 1834. The heavy withdrawal of silver rapidly diminished the available supply of fractional coins with attendant embarrassment to trade. The purpose of the Act of 1853 was to reduce the content of fractional silver coins by the use of a greater proportion of alloy in order to keep them in circulation. To this end, the weight of small silver coins was reduced by 6.91

² Statement of M. Cambreleng, of New York, in the House debates, 1833-1834, quoted by Laughlin, J. Laurence. *The History of Bimetallism in the United States*, p. 63. New York: D. Appleton & Co., 1886.

per cent. In order to prevent private individuals from taking advantage of profit to be gained from presenting silver to the mint, the principle of free coinage of fractional silver was revoked. Coins were to be struck by the mint for the Treasury in amounts determined by the needs of trade. The legal-tender power of subsidiary coins was limited to \$5. These coins were redeemable in gold when presented in certain quantities. These provisions prevented the overissue of subsidiary coins when silver was cheap in the market and their disappearance if silver should rise slightly above \$1.29 per ounce.

The importance of this law to money students lies in the fact that it constituted a virtual adoption of the gold standard twenty years before the debate over the remonetization of silver began, and preceded the adoption of the gold standard on the continent of Europe by two decades.

Paper issues repeated. — When President Lincoln came into the White House in 1861, the condition of the Treasury was far from satisfactory. Owing to the prevailing economic and financial crisis arising out of a liquidation fever in the face of the secession acts, government revenue was insufficient to meet ordinary peacetime expenditures. From April to June 1861, expenditures were \$23,500,000 and revenues less than \$6,000,000. The government was forced to borrow. A year earlier, Treasury notes had been floated at 12 per cent; certain interests agreed to take part of an issue of \$10,000,000, at interest rates ranging from 15 to 36 per cent. However, with the election of Lincoln, confidence returned and new money was secured at about 10 per cent interest. Continuation of this excess of expenditures over revenues led to the issue of paper money.

On February 25, 1862, the first legal-tender act was passed authorizing the issue of \$150,000,000 of United States notes in denominations of not less than \$5, one-third of which was to be used to retire previously issued demand notes. The notes were declared to be "lawful money and legal tender in payment of all debts, public and private, within the United States, except duties on imports and interest on public debt." These notes could be exchanged for 6 per cent bonds or deposited with any of the United States depositories at 5 per cent. The public reacted rather favorably to the bill.

That this \$100,000,000 was far from sufficient was obvious as the daily expenditures of the government were approximately \$1,250,000. Revenue had declined to about one-tenth of this amount. Through the following methods, the Treasury was worked into a favorable position by Secretary of the Treasury Chase, in the summer of 1862: First, \$250,000,000 were borrowed on Treasury notes; second, deposits of United States notes were asked for as temporary loans at 5 per cent; and third, certificates of indebtedness bearing 6 per cent, payable in one year or earlier, were issued to army contractors and similar creditors of the government.

Despite the success of this plan, further authorizations had to be provided by Congress. On July 11, 1862, less than five months after the first act, the second legal-tender act was passed, authorizing another \$150,000,000 of United States notes. Out of this amount, one-third was set aside for the redemption of funds in the government depositories.

Since these notes were not redeemable in gold on demand, gold ceased to circulate, except at a premium, so that greenbacks became the chief money available. Originally these notes were not issued in denominations of less than \$5. Since the paper dollar had depreciated so much that the withdrawal of fractional coins became profitable, the government experienced difficulties in providing money for fractional transactions. To alleviate this condition, the second legal-tender act provided that \$35,000,000 of the new issue should be in denominations lower than \$5, but no notes were to be issued for less than a dollar. If the Coinage Act of 1853 had reduced the silver content of subsidiary coins by 25 per cent instead of 6.9 per cent, this predicament could have been avoided.

The Secretary of the Treasury proposed two solutions. One was the further reduction of the silver content of subsidiary silver coins; the other, the use of postage and other stamps for fractional transactions. On July 17, 1862, Congress directed the exchange of stamps for United States notes. While these stamps were not legal tender among individuals, they were receivable in payments to the government in sums of less than \$5 and were redeemable in greenbacks on demand. These stamps, known as "shinplasters," differed from ordinary postage stamps in that they were somewhat larger and were not gummed.

The third and final issue of greenbacks occurred on March 3, 1863, bringing the total issue to \$450,000,000, with an additional \$25,000,000 in postage currency. Other forms of public debt were likewise greatly expanded so that the credit of the government was drastically impaired. The extent of the depreciation of United States notes during this period may be approximated by measuring their decline in terms of gold. From par in December 1861, the gold value of the notes fell to 38.7 cents in July 1864, following which they rallied to 73.7 cents in May 1865, only to decline again to about 68 cents. In addition to these note issues, the government financed its war expenditures by means of revenues obtained from the following sources: \$356,000,000 from internal taxes, \$305,000,000 from the tariff, and \$2,622,000,000 from the sale of bonds and Treasury notes.

The Civil War ended in 1865, but specie payments were not resumed until 1879. The reason for the maintenance of the irredeemable paper standard was the argument of the debtor class that restriction of the money supply would place an undue burden upon them. Prior to Lee's surrender, wholesale prices had fallen so that a contraction of the money would have meant further deflationary influences, with consequent difficulty in the payment of debts. Another reason for the postponement of specie payments was the United States Government's debt. With a declining price level, it would have been more difficult for the government to secure adequate revenues for debt service and retirement; the payment of taxes would have been a heavier burden with a dollar of high purchasing power. By the summer of 1878, the greenbacks outstanding amounted to nearly \$350,000,000. Congress, at that time, provided that no further decrease in this amount should be made. Any notes presented for redemption should be reissued.

THE MONETARY STRUGGLE FROM 1873 TO 1900

With the end of the Civil War and the decline in the wholesale price level, money conditions became more stable. In 1873, the coinage system of the United States was codified by the passage of a law in which the legal-tender quality of the silver dollar was limited and its free coinage discontinued. This was logical since only six million silver dollars had been coined in the years from

1853 to 1873. Between 1876 and 1878 new supplies of silver became so great that its price with relation to gold was lowered to 18 : 1. European demonetization of silver also added to the available supplies in the succeeding years.

With a mint ratio of 16 : 1, it would have been profitable for silver to be taken to the mint for coinage, driving gold from circulation, but the absence of a free silver coinage made this impossible. The silver interests dubbed this act, which made free silver coinage illegal, "The Crime of 1873," implying that a conspiracy had existed in the passage of the law. It is well known that, with the exception of the greenback episode, the country had been on a *de facto* gold standard since 1834; therefore, the charge is baseless.

The Bland-Allison Act of 1878. — Following the close of the Civil War, trade in the United States recovered rapidly. Sharp increases in railroad building provided employment for the men released from the two armies. From 1867 to 1872, wages and the physical volume of production advanced although commodity prices continued to retreat from the high point reached in 1865. This period of prosperity ended when excessive loans to a number of railroads forced the bankruptcy of certain New York banking houses. The years from 1873 to 1879 were characterized by depression and continued weakness of commodity prices.

Under these circumstances, it was easy for a coalition to develop between the debtor groups and those who would benefit from a rise in the price of silver. The political strength of this coalition was great because it was concentrated in certain sections of the country: the farm areas of the West and South were the areas of debt; the far western states were the important silver-producing regions. This coalition had been successful in maintaining the issue of greenbacks at a high level; now they turned their attention to the remonetization of silver.

The debate which preceded the passage of the Bland-Allison Act was fiery and impassioned, since it involved strong differences in class interests. Despite vigorous opposition and a presidential veto, the act was passed on February 28, 1878, and provided for

1. the obligatory coinage of not less than \$2,000,000 nor more than \$4,000,000 worth of silver into dollars each month,
2. the legal-tender power of these dollars (to be of the former weight and fineness) for all debts, public and private,

3. certificates of deposit for silver to be legal tender only for customs, taxes, and all public dues, and
4. the calling of an international monetary conference to set a ratio between gold and silver.

The Bland-Allison Act raised serious doubts at home and abroad as to the possibility of maintaining the established gold standard. Silver was distrusted and was used in making payments to the Treasury instead of gold. By the end of 1884, silver receipts made up almost half of the payments to the Treasury, in contrast to gold receipts which had dropped to 20 per cent. Had it not been for the fact that the Treasury, at the time, showed a surplus which was used to purchase and hold silver and simultaneously to add to the gold reserves, the government could scarcely have continued gold redemption. The purchase of silver prevented further reductions of the debt so that the government was forced to pay interest charges while piling up an unproductive silver supply. In order to force silver into circulation, two steps were taken, namely, in 1885, the issue of greenbacks in small denominations was discontinued and in 1886, silver certificates in denominations of \$1, \$2, and \$5 were authorized. The New York banks cooperated by exchanging gold for fractional silver at the Treasury. The dangers of the Act of 1878 were thus successfully avoided, but soon the Treasury was placed in an even more embarrassing position.

The Sherman Silver Purchase Act of 1890. — The Sherman Act changed the silver purchase clause of the former act by requiring a monthly purchase of 4,500,000 ounces to be paid for by the issuance of Treasury notes in denominations ranging from \$1 to \$1,000 in value; made these notes legal tender for the payment of all public and private debts and receivable for customs, taxes, and all public dues; and required the Secretary of the Treasury to redeem them in gold or silver at his discretion, and "to maintain the two metals on a parity with each other upon the present legal ratio, or such ratio as may be provided by law."

The change from the requirement of a stated number of dollars of silver to a stated weight was probably made in order to force continued purchases in large quantities in case the price of silver should rise. The final clause forced the Treasury to a gold redemption of the notes in order to prevent any of the silver money from falling below par with gold.

The danger encountered under the Sherman Silver Purchase Act was more serious than under the former act because successive economic crises had eliminated the Treasury's surplus which had previously been available for silver purchases. From 1891 on, gold payments to the Treasury declined and silver payments increased, owing to a fear that redemption would be discontinued and gold would rise in price. While the act was temporarily successful, partly as a result of speculation, in raising the market ratio of silver to 17.26 : 1 by August 1890, it fell again to 32.56 : 1 in 1894. The gold redemption fund held against United States notes soon was reduced below the required \$100,000,000. Attempts to exchange property for gold before the country was forced on a silver standard brought wholesale bank failures and the panic of 1893. As the public believed the panic to be the result of silver legislation, there was a general demand for repeal of the purchase clause.

Repeal of the Sherman Act in 1893 failed to relieve the strain on the Treasury since all notes outstanding were redeemable in gold. A total of \$576,000,000 worth of silver had been coined under the two silver acts. Two bond issues amounting in all to \$100,000,000 had been sold in the spring and fall of 1894 to raise funds; yet between November 1, 1894, and the spring of 1895, \$80,000,000 in gold had been withdrawn from the Treasury. Additional bond issues were sold for gold but the strain continued until the political campaign of 1896 settled the problem. McKinley's defeat of Bryan in this election denoted the public's desire for a gold standard. This standard was unequivocally established by the Act of March 14, 1900.

MONETARY CHANGES FROM 1900 TO 1933

The Gold Standard Act of 1900. — While the country first adopted the gold standard in 1834, in setting a mint ratio for the bimetallic standard which would permit only gold to circulate, the first legal establishment of monometallism took place under the Gold Standard Act of 1900. The act provided that the standard money unit should consist of 25.8 grains of gold, $\frac{9}{10}$ fine. The redemption fund for paper money was increased to \$150,000,000 and the retirement of Treasury notes was accomplished by their redemption as standard silver dollars were coined from the bullion held by the Treasury. At the same time, provision was made for

the issuance of gold certificates against gold bullion held by the Treasury, and the limit on subsidiary silver coins was raised to \$100,000,000. This act gave the American monetary system a standardized form which it retained until 1933, with the exception of the brief interval of the World War.

Monetary policy during the World War. — It is usually stated that one of the most significant consequences of the World War was the great increase in American monetary gold stocks. This statement is true, however, only if one refers to the period after 1915. Prior to that date the United States had lost a large amount of gold. During the three-year period from 1910 to 1912, approximately \$40,000,000 in gold was imported. But during 1913, the United States exported \$28,094,000, and in the following year, \$165,228,000. These gold exports represented the proceeds of heavy sales of European-owned securities and the maturing of \$80,000,000 of New York City short-term obligations, a large part of which was held abroad. From early 1915 until the summer of 1917, American gold stocks rose from \$1,500,000,000 to almost \$3,000,000,000, primarily as a result of exporting huge amounts of American merchandise.

In the autumn of 1917, an embargo on gold exports was declared, which remained in force until the summer of 1919. The Federal Reserve Board was given authority to grant or to refuse licenses, without which gold exports could not be made. In its annual report for 1917, the Board stated that "applications for permission to ship gold to European neutral countries have, except for a few days following the date of the order, been invariably declined." This action removed the country from the full gold standard even though internal convertibility was maintained.

The Pittman Act of 1918. — The late Senator Pittman stated that early in 1918 England found herself without sufficient silver to carry on her trade with the Orient. During a number of decades prior to this time, England had been gradually educating her Indian subjects to accept rupee silver certificates or notes redeemable upon demand in silver. In the early years of the World War, English trade carried a large excess of imports from the Orient, and the demands for silver to make payments were too heavy for her reserves.

The United States was informed of this predicament and was

asked for the immediate delivery of large quantities of silver. Without American cooperation, it was stated that England would have been forced to restrict redemption of these notes, thereby drastically affecting her ability to secure materials from the East. This situation, according to statements made by Senator Pittman in 1923, led to the Silver Act of 1918. However, the public was not informed of this condition at the time of the passage of the act which "was put through Congress in magnificent secrecy by the jerk of coat tails and by private explanations. . . ." ³ It is doubtful whether the "Indian Calamity" was the major influence leading to the passage of the Pittman Act. An examination of foreign exchange rates during this time reveals that rupee exchanges on Hong Kong and Shanghai had risen considerably over both the dollar and the pound sterling so that the action of the United States was, in part, a measure of self-protection, since the value of the dollar in terms of the rupee was supported by the action.

Under the act of April 23, 1918, the Secretary of the Treasury was authorized to melt or break up and to sell as bullion not in excess of 350,000,000 standard silver dollars. Any silver certificates that were outstanding against the dollars so melted were to be retired at the rate of \$1 face amount of such silver certificates for each standard silver dollar. Sales of bullion were to be made at the rate of not less than \$1 per fine ounce of silver.

This occasion presented a splendid opportunity to dispose of the silver that had accumulated in the Treasury under the silver acts of the previous century. But the silver interests prevented the Treasury from ridding itself of this unproductive asset by forcing an amendment to the bill, which provided that the mint later purchase $37\frac{1}{4}$ grains of pure silver from domestic mines for each dollar melted down. This silver was to be paid for at the fixed rate of \$1 per fine ounce. Under this provision the silver interests were granted a direct subsidy amounting to the difference between \$1 and the market price prevailing at the time of the Treasury's purchase. In the late spring of 1920, silver fell below \$1, whereupon the Treasury proceeded to rebuy silver. From then until the summer of 1923, by which time the entire amount that had been melted had been replaced, the government was paying \$1 an ounce for domestically produced silver when the world market price was be-

³ Westerfield, Ray B., *Our Silver Debauch*, p. 23. New York: The Ronald Press, 1936.

tween 50 and 70 cents. In this manner, approximately \$62,400,000 was given to the silver interests by an act of Congress. Even more shameless was that part of the law that forced the Treasury to buy silver to substitute for dollars that had been melted to provide metal for subsidiary coins.

MONETARY POLICY UNDER THE NEW DEAL

In the summer of 1919 the gold embargo was lifted and the United States returned to a full gold-coin standard. In the following decade, several forms of the gold standard were reestablished by the European countries, after inflation in varying degrees had been in effect. These returns to gold were greatly aided by a large volume of loans by the American Government, as well as by sales of foreign private and government bonds in the open market. But international economic stability proved to be an illusion.

In the spring of 1931, the Creditanstalt in Vienna was in danger of collapse, after two years of severe internal strain. American, French, English, Dutch, and Swiss financial institutions were large creditors of this bank and would have preferred to make new credits to forestall the imminent failure. The French Government, however, denied aid to Austria unless it would renounce the proposed customs union with Germany; this it refused to do. To avoid a complete financial collapse, the Bank of England placed the amount needed for reconstruction at the disposal of the bank, but European financial difficulties were too great to be stemmed. It should be recalled that falling commodity prices increased the national as well as the individual debt burden, and international loans were difficult to obtain in the state of fear that prevailed. To mitigate the financial crisis, President Hoover, in the summer of 1931, proposed a one-year moratorium for all intergovernment debts. France procrastinated in accepting. When the agreement finally was ratified, it was obvious that it could not turn the tide. Withdrawals from central and southeastern European banks continued, leading to a banking crisis over the entire continent. A number of so-called standstill agreements were concluded, under which foreign creditors consented, in return for certain guarantees, not to demand payment of credits.

The position of the British pound was likewise exceedingly vulnerable in 1931. Internal conditions would have made the strain great

even without the overwhelming volume of short-term foreign deposits and foreign holdings of short-term sterling bills. Withdrawals from London were heavy throughout the summer of 1931 and the gold standard was finally abandoned by the British on September 21, 1931. A number of other European countries were also forced off the gold standard at this time.

The abandonment of the gold standard by many European countries during 1931 stimulated large withdrawals of gold from the United States. In October 1931, \$338,000,000 in gold was exported, followed by additional shipments of \$500,000,000 in the summer of 1932. These withdrawals from the United States were the result of either fear of devaluation of the dollar or attempts to secure speculative profits if the United States should be forced to abandon the gold standard.

Despite these attacks on the American monetary system, it cannot be said that the dollar was at any time in danger of being forced off gold. Our subsequent departure from gold must, therefore, be explained on other bases than an imminent gold shortage. The justification of the devaluation of the dollar can be found in the economic effects of European devaluations.

The effects of devaluation on countries on the gold standard.

— Widespread devaluation of currencies in 1931 resulted in a disturbance of financial and economic conditions in the countries still on the gold standard. This disturbance was revealed in a number of ways:

First, exporters in the countries on the gold standard found it difficult to compete with firms located in the countries with depreciated currencies. Usually a nation devaluing its currency by 25 per cent, for example, aids its exporters, temporarily at least, by reducing prices correspondingly in terms of other exchanges.

Second, countries which possessed small gold reserves and foreign exchange reserves and which desired to maintain their money units at the former value in gold, had to adopt various forms of exchange or transfer restrictions to prevent undesirable withdrawals of capital. The use of this procedure by other countries impounded the funds of United States citizens held in foreign centers.

Third, in countries on the gold standard, prices continued to fall, rendering the budgetary situation increasingly complicated.

Fourth, the financial position of the countries on the gold stand-

ard was highly insecure, for at the slightest provocation, wholesale withdrawals of short-term funds could be made. For example, a rumor that the United States would go off the gold standard brought a flight from the dollar to protect holdings from the effect of devaluation. After the rumor had subsided, balances were transferred back to New York or were released from earmark. Each time such sudden transfers of funds were made, international financial markets became more sensitive to rumors of this type.

Fifth, in the United States, the cumulative effect of the deflationary trend intensified the rapidly spreading banking crisis of the autumn of 1932. The decline of commodity, real estate, and security prices had inflicted great losses on banks, and continuation of gold redemption was felt to be a contributing factor of great importance in causing deflation.

The gold embargo. — On March 6, 1933, President Roosevelt proclaimed a bank holiday for the entire country. At the same time, under the authority of wartime powers, an embargo was placed on further exports of gold; all holders of gold certificates or gold coins were ordered to present them at the Federal Reserve banks or at the Treasury for exchange into other forms of money. This action, technically speaking, was tantamount to the abandonment of the gold standard even though the dollar in relationship to other currencies possessed approximately the same value as before. It was not until April 20, 1933, by the proclamation of a gold embargo of indefinite duration, that the dollar fell from its former parity with gold. Support was withdrawn from the dollar and it was left to find its own level in the international markets. Later in the year a policy of deliberate devaluation depressed the dollar still further by raising the price of gold. The attitude of the American delegation at the London Economic Conference in 1933 indicated that the United States was not prepared to agree to monetary stabilization.

The Thomas Amendment. — A coalition of congressmen representing the silver interests and other inflationists succeeded in incorporating into the Agricultural Adjustment Act of May 12, 1933, the first legislative authorization of dollar devaluation. The content of the monetary provisions of this act may be summarized as follows:

Whenever the President finds upon investigation that (a) the foreign commerce of the United States is adversely affected by reason of the depreciation in the value of the currency of any other

government or governments in relation to the present standard value of gold, or (b) that action under this section is necessary in order to regulate and maintain the parity of currency issues of the United States, or (c) that an economic emergency requires an expansion of credit, or (d) that an expansion of credit is necessary to secure by international agreement a stabilization at proper levels of the currencies of various governments, he may at his discretion, direct the Secretary of the Treasury to enter into agreements with the several Federal Reserve banks and the Federal Reserve Board (1) to purchase securities from banks and individuals and (2) to purchase direct from the Treasury, United States government obligations amounting to as much as \$3,000,000,000. (The Federal Reserve banks were relieved of any penalty in case their reserves fell below the required minimum because of this action.)

If the Federal Reserve banks should refuse to comply or if further increase in the circulating medium should be advisable, the President may, under the authority granted by the act of February 25, 1862, call for an issue of greenbacks amounting to as much as \$3,000,000,000. These notes may be issued only for the purpose of retiring interest-bearing obligations of the government. Any greenbacks issued for this purpose are to be retired at the rate of 4 per cent per year of the amount outstanding.

The President by proclamation may also fix the weight of the gold dollar in grains $\frac{9}{10}$ fine and the weight of the silver dollar in grains $\frac{9}{10}$ fine at a definite fixed ratio in relation to the gold dollar, in such amounts as he finds necessary, from his investigation, to stabilize domestic prices or to protect foreign commerce from the adverse effect of depreciated foreign currencies. He may likewise provide for the unlimited coinage of such gold and silver at the ratio so fixed. If the United States should enter into agreements with other governments whereby a mint ratio between gold and silver is established, the President may fix the weight of the gold dollar in accordance with the ratio agreed upon. In no event, however, may the weight of the dollar be fixed so as to reduce its former weight by more than 50 per cent. The Thomas Amendment also permitted the President, for a period of six months, to accept up to \$200,000,000 worth of silver at 50 cents per ounce from foreign governments in payment on their debts; silver certificates were to be issued against this bullion.

By repeating certain provisions of the Gold Standard Act of 1900, it appears that Congress planned eventually to reestablish the gold standard. Yet in permitting the President to provide for unlimited coinage of gold and silver at a definite ratio, the act legalizes a return to bimetallism.

The London Economic Conference of 1933. — While these developments were taking place in the United States, the World Monetary and Economic Conference was convening in London with the chief object of arriving at a definite basis for monetary stabilization. One reason why the conference failed to accomplish this purpose was that it was prematurely called, although subsequent events have indicated that world politics would have made monetary stabilization an extremely difficult task. Moreover, the conference failed to secure the cooperation of the government of the United States which, at that time, regarded even temporary agreement as untimely. One result of the American refusal to cooperate in an attempt at stabilization was that the countries remaining on the gold standard (Belgium, France, Holland, Italy, Poland, and Switzerland) issued a joint manifesto proclaiming the creation of a gold bloc.

Another result of the conference was a four-year agreement with regard to silver, mainly at the insistence of American representatives. This agreement stipulated that the five silver-producing countries should purchase or withdraw from the market 35,000,000 ounces of silver annually for four years. The United States agreed to take 69.78 per cent of the total; Mexico, 20.45 per cent; Canada, 4.78 per cent; Peru, 3.13 per cent; and Australia, 1.86 per cent. When it is recalled that the American output of silver was less than one-fourth of the total world production, it can be seen that the United States was, in effect, attempting to raise the world level of the price of silver in order to aid the relatively few producers in the United States. Furthermore, it was understood that the agreement would be kept in force, even if any of the signatories abandoned it, by the United States increasing its purchases proportionately. The three outstanding silver-holding countries (China, India, and Spain) agreed to keep their annual disposals of silver within certain limits during the life of the agreement.

The devaluation of the dollar. — On August 29, 1933, an executive order was issued by the President of the United States

authorizing the Treasury to buy newly mined gold and to sell it "at the best price obtainable in the free gold markets of the world" to anyone licensed to acquire gold for industrial uses or for export purposes. A later provision ordered all gold, with some exceptions, to be delivered to the Treasury for redemption in other forms of money. This was the beginning of a deliberate devaluation of the dollar. The daily quotations posted by the Treasury, under this authorization, ranged from \$31.36 per ounce on October 25, 1933, to \$35 per ounce on February 1, 1934.

The Gold Reserve Act of January 30, 1934, formalized the devaluation of the dollar and produced the following results:

1. Title to all gold coin and bullion held by the Federal Reserve System passed to the Treasury, the Federal Reserve banks being compensated by either credits on the books of the Treasury or gold certificates.

2. The government created for itself a "book profit" of approximately \$2,800,000,000 (the difference between gold held at \$20.67 and \$35 per ounce). Out of this profit, \$2,000,000,000 were set up as an exchange stabilization fund. This fund was to be employed to stabilize the value of the dollar in terms of foreign currencies.

3. The President was given the power to devalue the dollar to a level between 50 per cent and 60 per cent of its former value. This power, while originally granted for only two years, has since been renewed.

4. The President was also authorized, in his discretion, to reduce the weight of the standard silver dollar the same percentage that he reduced the weight of the gold dollar.

5. The Secretary of the Treasury was required to prescribe the conditions under which gold could be acquired, held, and transported (a) for industrial purposes, (b) by the Federal Reserve banks for the purpose of settling international balances, and (c) for any other purposes not inconsistent with the purposes of the act.

6. The redemption in gold of any money of the United States was prohibited. Coinage of gold was forbidden except for foreign account. However, in order to settle international balances or to maintain the parity of the monies of the United States with gold, the Federal Reserve banks, upon the approval of the Treasury, were allowed to redeem gold certificates in gold bullion. Reserves for United States notes and Treasury notes of 1890 and the security for

gold certificates were to be maintained in gold bullion equivalent to the amounts required under previously existing laws.

7. The Treasury was given the power to buy and sell gold, at home or abroad, at rates and under conditions, as seemed desirable for the public interest.

On January 31, 1934, a presidential proclamation was issued making the Gold Reserve Act effective. The gold content of the new dollar was fixed at $15\frac{5}{21}$ grains of gold of standard weight, reducing the dollar to 59.06 per cent of its former weight. A dollar of this gold content gave gold a value of \$35 per ounce. At the same time, the Treasury announced its willingness to sell gold for export to the countries on a gold standard whenever the rate of exchange made such shipments profitable.

In a radio broadcast on May 7, 1933, President Roosevelt gave his reasons for the inflationary monetary policy. He said, "The Administration has the definite objective of raising commodity prices to such an extent that those who have borrowed money will, on the average, be able to repay that money in the same kind of dollar which they borrowed." A further reason for the policy was the temporary aid given to exporters by the external depreciation of the dollar.

The deliberate devaluation of money for the purpose of inducing a stated degree of inflation is a new device in the list of instruments for monetary control. Formerly, it was felt that the shock to the economic system which would accompany such a procedure would outweigh any benefit which would be derived from it. When the President embarked upon this program, his defenders were sure that a price rise which could be controlled would take place. His opponents, however, agreed that prices would rise but they were convinced that control could not be effective.

Neither the hopes of the Administration nor the fears of the business group have yet been fulfilled. While prices advanced for a time, mainly under the influence of restrictions on industrial production and failures of agricultural production, they declined thereafter and have since maintained a level considerably below that generally expected.

Perhaps it is too early to evaluate the policy of devaluation of the money unit as a method of securing a rise of prices. It should be noted that the policy has been employed during years when there

were few outlets for the private investment of funds. If the customary volume of private investment had been available to supplement public investment, the level of prices would probably have risen. On the other hand, there may be some justification for the assertion that private investment would have expanded if the monetary policy had afforded a stable basis for the computation of costs and profits. In any event, it is clear that this policy has greatly magnified the base upon which credit expansion can take place, and has provided thereby one of the requisites for inflation at some future time.

The Silver Purchase Act of 1934. — The final step in the recent reorganization of the money system in the United States was the passage of an act requiring the purchase of silver by the Treasury. This policy was approved by the President as follows: "Increasing the proportion of silver in the abundant metallic reserves back of our paper currency is in the public interest. We seek to remedy a maladjustment of our currency by the further acquisition and monetary use of silver."

The Silver Purchase Act giving effect to this objective states that

1. The policy of the United States is to increase the proportion of silver to gold in the monetary stocks of the United States, with the ultimate objective of having and maintaining one-fourth of the monetary value of such stocks in silver.

2. The Treasury is authorized to buy silver, at home or abroad, at a price not in excess of \$1.29 per ounce, and in the case of silver located in the United States on May 1, 1934, at a price not exceeding 50 cents.

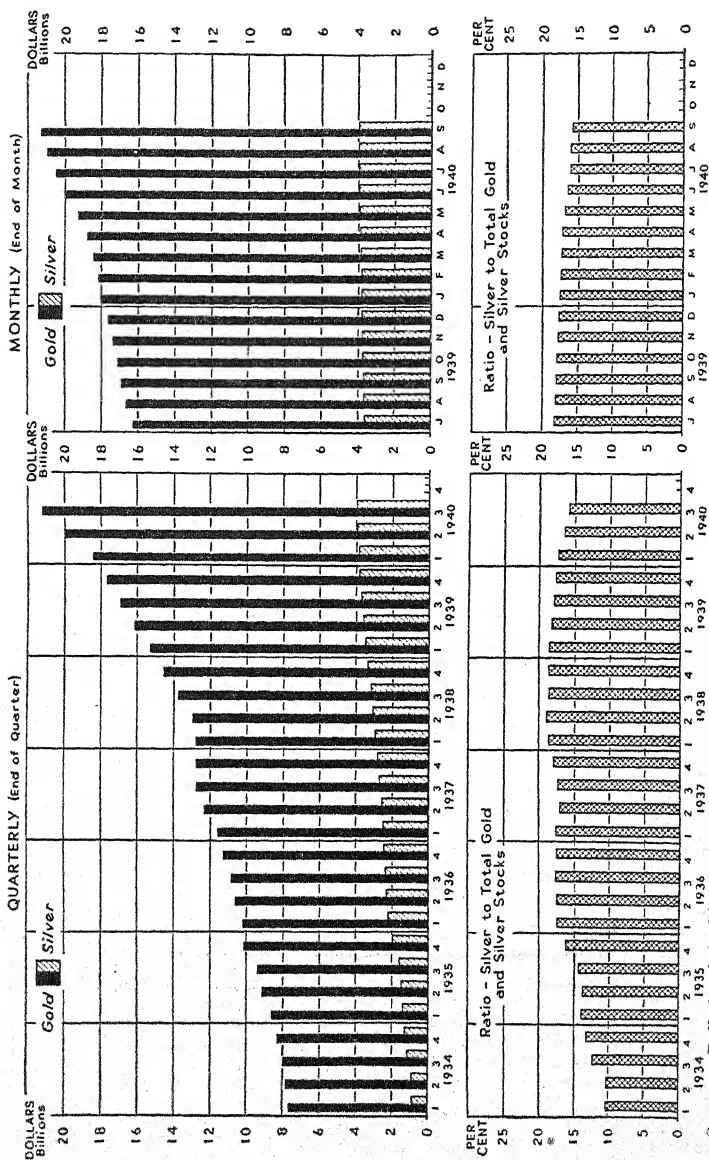
3. Whenever the government's stock of silver exceeds the specified 25 per cent of the monetary gold and silver stocks or the market price is higher than \$1.29, silver may be sold, providing no reduction in the silver required as security against outstanding silver certificates will result.

4. Silver certificates are to be issued against silver received; their face value should not be less than the cost of all silver bought under this act. These certificates are to be considered legal tender and are redeemable in silver dollars.

Since the government possessed large stocks of gold when this act was passed, the requirement that silver be purchased until it

MONETARY STOCKS OF GOLD AND SILVER IN U.S.

Gold per Ounce \$35.00; Silver per Ounce \$1.29



Source: *Bulletin of the Treasury Department*, October, 1940.

Fig. 15. MONETARY STOCKS OF GOLD AND SILVER IN THE UNITED STATES

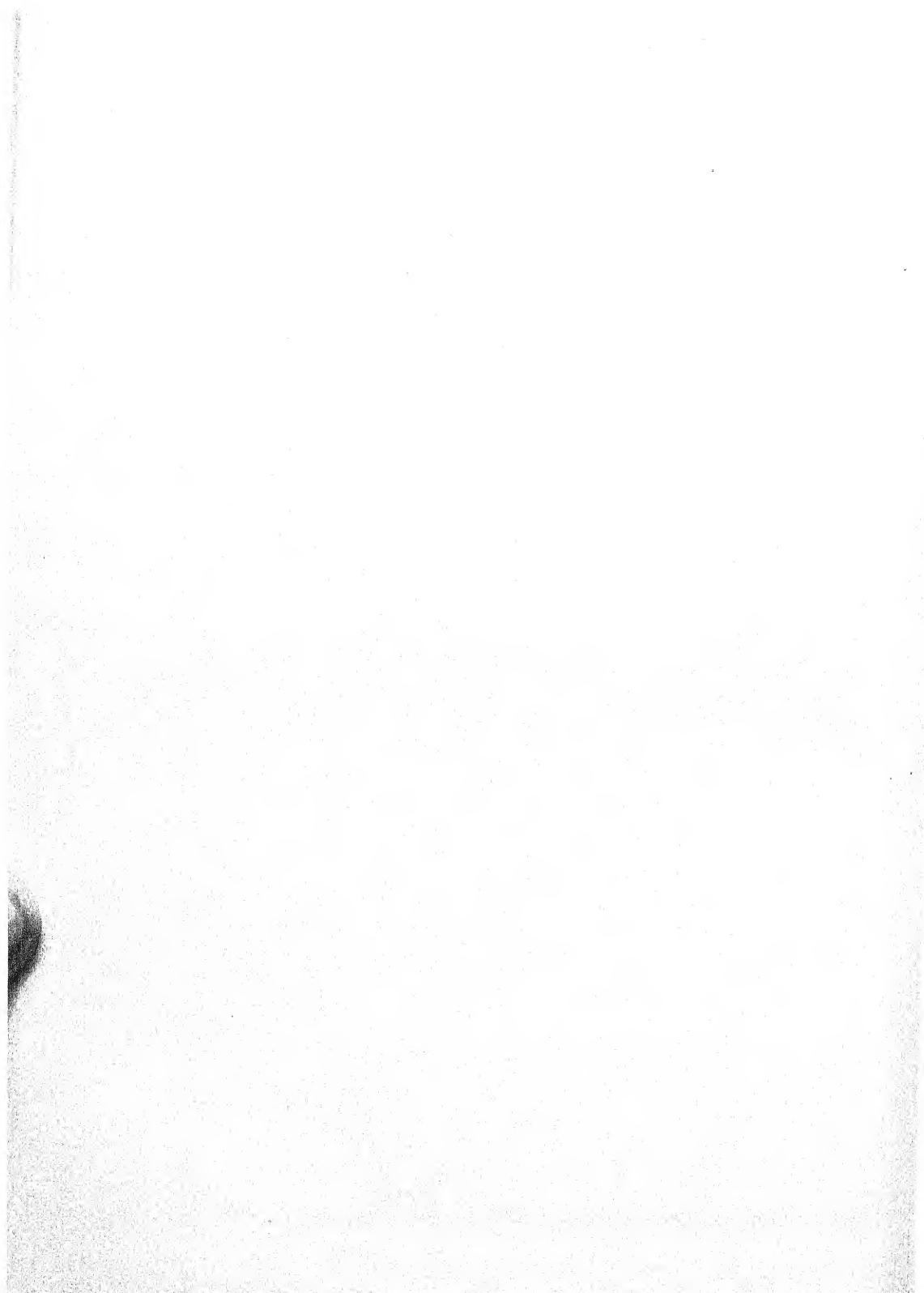
formed one-fourth of the total of gold and silver held, led the Treasury to acquire larger silver stocks. From 700,000,000 ounces in July 1934, these stocks increased to 3,094,000,000 ounces in September 1940, but enormous gold imports during the same period prevented the Treasury from fulfilling the requirements of the Silver Purchase Act. Silver represented 10.3 per cent of the monetary stocks at the end of June 1934, 19.1 per cent in June 1938 and 15.8 per cent in September 1940.

The Silver Purchase Act seems to have been intended for several purposes. One purpose seems to have been to raise the price of silver and simultaneously to raise the level of commodity prices. It was also believed by some that the act would restore the purchasing power of the Orient and thereby increase the volume of our trade with that region. However, the act has had the opposite result for, as the price of silver rose, silver bullion was shipped out of the East to take advantage of the favorable price. Thus the Orient was drained of its metal and was forced to change its monetary organization to prevent a drastic fall of prices. Another reason that has been advanced in support of the Silver Purchase Act is that the government gains seigniorage from its silver operations. By paying 71.11 cents for domestically mined and about 40 cents for foreign bullion, the government could make a profit of the difference between these costs and the mint value of \$1.29 per ounce. Up to the present, however, the government has not gained this profit since it was unwilling to issue silver certificates in order to do so. Moreover, it is apparent that the same result can be obtained by simply issuing paper money without metallic reserves.

The most recent change in the silver policy of the United States occurred on July 5, 1939, when the Senate established a legal price for domestically mined silver at 71.11 cents per ounce, and extended the power of the Treasury to set the price for silver purchased from foreign sources. It is interesting to note that this latest action with respect to silver was supported by non-monetary arguments. In the debate preceding the act which forced the Treasury to pay 71.11 cents instead of 64.64 cents per ounce which it had paid previously, the act was defended as a form of federal relief to the silver-producing regions. This argument gave the subsidy somewhat the same status as work relief programs in the urban regions.

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PART TWO

*FUNCTIONS AND STRUCTURE OF
COMMERCIAL BANKING*

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CHAPTER V

THE NATURE AND FUNCTIONS OF COMMERCIAL BANKING

Introduction. — Analyses of many topics relating to money presume a knowledge of the nature and functions of banking since the behavior of money is conditioned by the banking process. The amount and velocity of money in circulation, for example, are closely related to banking operations. In fact, money and banking are two aspects of the process of making payments rather than two separate subjects. Hence, a discussion of both the nature and functions of money and the nature and functions of banking must necessarily precede certain topics, in the discussion of which it is assumed that money and banking are parts of essentially the same mechanism.

Commercial banks are financial institutions intended to perform certain services for the economic society of which they are a part, in return for a reasonable dividend on the capital stock to which their owners have subscribed. Whatever economic functions banks may perform, it is misleading to state that capital flows into the banking business for any other primary reason than to secure a profit from the performance of those functions. Hence, understanding the process by which banks make money provides the most realistic approach to an understanding of the nature of the banking process. This is the point of view of the individual banker.

Of the great variety of services that commercial banks perform, some may be classified as incidental services to individuals and business firms while others are more important from the standpoint of the functioning of the economic system as a whole. Accordingly, this chapter considers two main topics: the motives for organizing commercial banks and the economic functions of commercial banks. Under the first, the actual steps involved in organizing a bank are explained and a general survey of the process by which banks become profit-making business ventures is undertaken. Under the second, the traditional concept of commercial banking and the

present-day limitations of that concept are briefly analyzed. In later chapters we shall be concerned with the inspection of the banking process in greater detail.

THE MOTIVES FOR BANK FORMATION

The need for banking services. — In the United States, at the present time, there are very few communities that need additional commercial banking services. If the widespread failures and consolidations during the past two decades are sound criteria, it may be said that the 30,812 banks which existed in this country in 1921 were far too many. In June 1940, there were 14,953 national and state banks in operation. During the half century prior to the World War, the number of banks in the United States increased more than five times as fast as the population. Although more than half the banks existing in 1930 have disappeared, there remains to-day one bank for every 8,800 men, women, and children. Even in some villages of less than 1,000 population more than one bank has been chartered.

The motives for establishing new banks have not always been confined to the desire for profits nor to a desire on the part of their promoters to render a great public service to communities in need of banking services. Sometimes banks are organized to satisfy the demands of certain persons who want to obtain a larger and freer line of credit than is available to them from existing banking institutions, although the existing institutions may be able to grant the credit applied for, as far as the volume of those requests is concerned. Some new banks have been formed for the very questionable purpose of serving as a dumping ground for the doubtful assets of other institutions. At other times ambitious holders of minor offices in existing banks have desired immediately to become heads of banking firms. The formation of new banks fulfilled this ambition. Sometimes dissension, as well as ambition, among bankers has accounted for the establishment of new banks. The mere desire to be known as bankers on the part of certain persons who have accumulated wealth in other fields has been another driving force in the formation of new banks.

The location factor. — Granting a community's need for a new bank, the organizers study the location factor within that community as carefully as do the managers of a merchandising chain

when they establish a new store in a city or town. Failure to make such a study prior to establishment of a bank might result in the payment of too high rental charges or too high an investment in the bank building, in proportion to the amount of business the bank can attract. When determining a location for a bank the degree of industrial diversification in the community, the volume of the bank's probable accounts, and the migrations of the population out of and into the region in question are all given careful consideration.

The amount of the rental charges or the investment in bank building and equipment compared with the volume of the probable business which it is expected that a new bank can attract, is an important factor in determining its probable success or failure. The fact that the volume of business a new bank can hope to secure is unpredictable should not preclude a careful study of the factors to which attention has been called. The importance of the size of the investment in bank premises has been recognized in recent federal banking legislation. The Banking Act of 1933 provides that no new national bank may invest, directly or indirectly, in bank premises an amount in excess of its capital stock without the approval of the Comptroller of the Currency. A new state bank which becomes a member of the Federal Reserve System must obtain such permission from the Board of Governors of the Federal Reserve System. The aim of the conservative banker is to write down as soon as possible the book valuation of banking premises to a figure around 25 per cent of capital stock.

When it is once determined that a community needs banking services for the first time or further banking facilities, a system of free private enterprise would allow a group of persons to establish a bank. The history of banking in most countries, however, reveals a growing tendency to place restrictions upon bank formation. At one time, it was a comparatively easy and simple matter to form a bank. Recently, government agencies have been reluctant to grant charters to new banks where present banking facilities are adequate. The existing banks, therefore, enjoy a protection which they would not have if absolute freedom of individual initiative and free private enterprise existed.

Procedure of organization. — One of the methods employed by supervisory authorities to prevent a greater multiplicity of bank-

ing services in communities with adequate banking facilities is to require rigorous standards for organizing a bank. On the other hand, these same authorities have made efforts to facilitate the organization of banks, especially in the smaller communities where banking services are inadequate owing, perhaps, to bank failures.

1. A newly organized bank may secure either a national or a state charter. A number of considerations might prompt the promoters of a new bank to apply for a state charter. Among these are the lower capital requirements which the banking laws of some states impose, and the greater restrictions in banking operations under the federal law. The tendency, however, has been to remove these differences between state and national requirements. Unfortunately, perhaps, the differences have frequently been eliminated, not by making state requirements more rigid but by lowering those under federal law. The McFadden-Pepper Act of 1927 was phrased seemingly in a way to indicate that its authors sought to remove federal restrictions which placed the national banks at a competitive disadvantage with state banks. The Federal Reserve Act of 1913 and later amendments to it permit national banks to engage in such activities as the performance of fiduciary functions which were not theretofore allowed them. More recently, the Federal Deposit Insurance Corporation has sought to raise the standards of banking practice for both state and national banks.

The organizers of a bank must also decide whether to adopt that form of organization which permits the performance of trust functions. This decision would be based upon the prospects for obtaining a profitable volume of trust accounts. The performance of fiduciary services by the trust departments of banks now enjoys widespread public confidence, a great deal of promotional work having been done in recent years to acquaint the public with the fiduciary functions which banks perform in addition to the ordinary commercial functions.

2. Assuming that the organizers have decided to apply for a national bank charter, they must file a formal application for reservation of title and authority to organize with the Comptroller of the Currency who furnishes "Instructions of the Comptroller of the Currency Relative to the Organization and Powers of National Banks."

The following copy of the "Application to Organize a National Bank" is self-explanatory:

APPLICATION TO ORGANIZE A NATIONAL BANK

....., 19..

To the Comptroller of the Currency,
Washington.

Sir: We, the undersigned, prospective shareholders, being natural persons and of lawful age, intend, with others, to organize a national banking association, under the title of "The . . .," to be located at . . ., county of . . ., State of . . ., with capital of \$. . . and surplus of \$. . ., to succeed the . . . Bank of . . . Population . . .

We request that the title be reserved and that the necessary instructions be sent to . . ., who is an actual resident of the place where the proposed bank is to be located.

It is proposed to purchase or build a banking house, the amount to be invested (including cost of fixtures) being \$

It is proposed to lease or rent a banking house, the amount of annual rental to be \$

We hereby further certify that no fee or commission has been paid or has been contracted to be paid, directly or indirectly, by the bank or by anyone in its behalf, to any person, association, or corporation for securing subscriptions for or selling stock in said proposed bank.

Signatures of Applicants	Residences	Businesses	Financial Strength, in Figures	Share to be subscribed for
.....				
.....				
.....				
.....				
.....				

READ THESE INSTRUCTIONS CAREFULLY

The name of the place should form a part of the title, thus, "The First National Bank of . . .," but the name of the State should not be included.

The application must be signed by at least five prospective shareholders, preferably the proposed officers or directors.

The correspondent should be a resident of the place where the bank is to be located, a prospective shareholder, and if possible an officer or director of the proposed bank.

It is not necessary for the applicants to subscribe for the entire issue of stock. Only the actual number of shares to be held by each should be stated, and each applicant should be worth financially twice the value of the stock for which he subscribes.

The following shows the National, State, or private banking institutions with which the applicants are, or have been, connected either as officers or directors:

Applicant	Institution	Position	Period
.....
.....
.....
.....
.....

(Date)

(Signed),
Correspondent.*

* N. B. The correspondent is requested to furnish, as early as possible, a list of the prospective officers and directors of the proposed organization, and a statement showing their previous connection, if any, with other banking institutions.

3. After receiving the formal application for a charter, the Comptroller of the Currency appoints an examiner to conduct an investigation with special emphasis upon the following factors:

- a. The general character and experience of the organizers and of the proposed officers of the new bank.
- b. The adequacy of existing banking facilities and the need of additional banking capital.
- c. The outlook for the growth and development of the town or city in which the bank is to be located.
- d. The methods and banking practices of the existing bank or banks, the interest rates that they charge customers, and the character of the service which, as quasipublic institutions, they are rendering to the community.
- e. The reasonable prospects for success of the new bank if efficiently managed.

4. If the report of the examiner and reports from other sources, such as the report of the banking commission of the state in which the new bank is to operate, and the report of the Federal Reserve bank of the district are favorable, the Comptroller may authorize the organizers to receive subscriptions to the capital stock of the bank.

5. When the capital stock is subscribed and paid for in cash to the extent required by law, "Articles of Association" and the "Organization Certificate" are signed by at least five persons and filed with the Comptroller of the Currency.

6. The persons elected directors and other officers take an oath of office. The officers are required to file their official signatures with the Comptroller's office.

7. Finally, after numerous certificates and attestations have been filed, including the application and payment for the stock in the Federal Reserve bank, the Comptroller of the Currency issues a "Certificate of Authority to Commence Business."

THE BANKING PROCESS

Capital funds. — Many countries have no regulations concerning the amount of subscribed and paid-in capital a bank must have before it may begin business. In the United States this practice has not been followed; instead, specific regulations concerning capital requirements have been adopted. The purpose of these requirements is to discourage the establishment of banking institutions by incompetent or financially weak persons. A further purpose of these minimum requirements is to prevent the organization of banks with such a small amount of capital that the total amount of business they can perform renders a proper diversification of the assets of those banks difficult or impossible. Hence capital requirements place a limitation upon the establishment of banking institutions and furnish some degree of protection to bank customers.

Assuming the need for additional banking facilities in a community and assuming that capital requirements can be met, the organizers of a bank may purchase, for example, a thousand shares of capital stock at \$100 par value per share. If they wish to begin banking operations with a contributed surplus, they may do so by following the simple expedient of paying an amount in excess of the

par value of each share of stock, the par value being then carried in the capital stock account and the amount in excess of the par value in a surplus account. This hypothetical banking institution is now ready to begin operations with \$100,000 of capital stock and, let us say, \$20,000 in a surplus account. Later, as earnings accrue from these operations, an undivided profits account is set up, which is also a part of the capital funds of the bank. These three liabilities of the bank to its owners, namely, the capital stock, the surplus, and the undivided profits, constitute the bulk of its capital funds.

The organizers of this bank may invest a part of their capital funds in bank building and equipment, or they may lease their banking quarters and invest the remainder in some form of earning assets. Since the capital funds of a bank are not subject to withdrawal, as are deposits, it is usually assumed that they are supported on the asset side of the bank's balance sheet by some form of long-term investment.

Thus far in our discussion, there has been no intimation of the means by which a bank may gain earnings on its capital stock. In general, it is difficult if not impossible to make a profit unless a bank comes into possession of earning assets in excess of its capital stock. In fact, a financial institution can hardly be called a bank if it trades entirely with its own capital.

Prior to the accumulation of assets in excess of its capital stock, the balance sheet of a bank might be as follows:

<i>Assets</i>		<i>Liabilities</i>	
Bank premises, etc.	\$ 15,000	Capital stock	\$100,000
Cash	<u>105,000</u>	Surplus	<u>20,000</u>
	<u>\$120,000</u>		<u>\$120,000</u>

Deposits. — A bank accumulates earning assets in excess of its capital stock as it builds up its deposit liabilities. In other words, it increases both its assets and its liabilities by receiving cash, promissory notes, etc. from its customers and giving them claims against itself (deposit credit) in exchange. The growth of a bank is, therefore, reflected in a mutual rise in the volume of its deposit liabilities and its earning assets. The increase in these items need not be proportionate, however, since a bank's nonearning assets might grow at a greater or slower rate than its earning assets.

The point most essential to an understanding of the nature of a

bank deposit is that it is a liability of a bank; it is a bookkeeping entry signifying a contractual obligation on the part of the bank to honor a depositor's demands for payment. In the case of a demand deposit, the bank agrees to redeem this claim by paying cash on demand to the extent of the depositor's credit balance. In the case of a time deposit, the depositor's claim is limited by certain conditions set forth in an instrument such as a time certificate of deposit. For example, the depositor might be required to give the bank notice a specified number of days prior to withdrawing his deposit. In return, the bank may obligate itself to pay a specified rate of interest on the depositor's credit balance.

In addition to the emphasis given to the fact that a bank deposit is a liability of a bank, two other characteristics of a bank deposit are worthy of consideration. The first of these is that the depositor does not receive a claim to the identical things he brought to a bank. He receives instead a right to call for an equivalent amount of money. A bank deposit is, therefore, a *fungible*, that is, the items which a depositor brings to a bank lose their identity in the whole of the bank's deposit liabilities. The second of these considerations is that the depositor does not determine the use which the bank makes of the money, promissory notes, etc. which are turned over to it by the depositor. Instead, the bank may shift its assets from one form to another in any manner that is permitted by the banking laws under which it operates. An understanding of these basic characteristics of a bank deposit is assumed in all discussions relating to this subject in later chapters.

Deposits to capital funds ratio. — It has been said that banking operations cannot be profitable unless the earning assets are several times as large as the capital stock. In general, if the deposits of a bank are large compared with its capital funds, the ratio between its earning assets and capital funds can also be high and the bank is in a favorable position to earn a high rate of return on its capital stock. In other words, the secret of profitable banking lies in the maintenance of reasonably large earning assets relative to capital stock.

If deposits are exceedingly high in relation to capital funds, the owners may be said to assume too small a proportion of the risk of the banking enterprise, and the depositors too large a proportion of that risk. If the deposits are too low, the bank is not in a position

to maintain a ratio between earning assets and capital stock favorable to earning a reasonable return per share of stock. The risk factor is too great in the one case and the bank is not likely to be successful in the other.

What a reasonable proportion of capital funds to deposits is can best be arrived at by analyzing a composite balance sheet of a large number of banks. This task is discussed later in Chapter XV. Here we are concerned with this ratio only in so far as it is an aid in revealing the nature of the banking process. It may be stated, however, that the Federal Deposit Insurance Corporation has criticized banks whose statements reveal a ratio between deposits and capital funds of more than 10 : 1 and those whose net sound capital is less than 10 per cent of the appraised value of their assets.

Earning assets. — The earning assets of a bank consist chiefly of loans and discounts and investments. Loans and discounts are evidenced largely by promissory notes held by the bank against its customers, although some open-market loans, such as commercial paper and bankers' acceptances, may be included in the same category. A discount differs from a loan in that the interest is deducted in advance. To illustrate: in the case of a discount, a customer's account would be credited with \$985 on a note for \$1,000 maturing in ninety days, assuming an interest rate of 6 per cent. In the case of a loan, the customer receives \$1,000 at the time of entering into the transaction and is obliged to pay \$1,015 at maturity. The net rate of interest is slightly higher in the case of a discount, since the borrower pays \$15 for the use of \$985 for three months, while in the case of a loan, he has the use of \$1,000 at the same price.

Until recently, the problems of banks relating to their bond portfolios were accorded less attention than other problems, such as those relating to note issue and loans to customers. At one stage in the development of banking institutions, it was generally assumed that local banks could hardly exist without the note-issue privilege, although some contemporaries thought they ought never to have had it. With the development of deposit banking, the issuance of circulating notes became a minor aspect of banking operations and was finally abandoned altogether as a function of the commercial banks. As the emphasis on the note-issue function declined, the emphasis on loan policies of banks increased. At

the same time, the development of security markets furnished the facilities for a larger volume of long-term financing. Although the growing importance of investments among the earning assets of banks is not of recent origin, it is only since 1933 that the investment holdings of commercial banks have exceeded the volume of their loans and discounts. Hence, commercial banks are today forced to rely for income upon their investment account in much greater measure than formerly.

The loan and investment policy of a bank is a vital one. Upon it depends the bank's success or failure, and the margin between success and failure is usually narrow. A bank's expenses consume a large portion of its total income. In fact, a bank is doing quite well if it has a net income of \$1 on every \$5 of gross income. Thus a loss of \$1,000 on a loan offsets the net income from \$100,000, provided the total income from that amount is \$5,000 and the expenses of handling that loan are \$4,000. Similarly, small losses on several investments may offset the entire net income from its investment account.

For the purpose of handling loans and investments satisfactorily, large banks maintain credit departments to study applications for loans, and special departments to study and recommend suitable investments for bank funds. Although small banks may not have these special departments, their officers can often handle loans as skillfully as the officers of large banks. They can obtain expert advice concerning investments from their correspondents or from advisory firms, if necessary. Three fundamental factors that a bank must take into account in making loans are: wide diversification, good and sufficient security, and careful analyses of the financial position of the borrowers.

Earning assets to capital stock ratio. — In our discussion of bank deposits it was said that the ratio of earning assets to capital stock can be high if the ratio of deposits to capital stock or capital funds is high. This statement is true whether the accumulation of deposits is explained from the point of view of the individual bank or the point of view of the whole banking system. From the former point of view, it may be said that deposits provide the main source of the lending power of banks. This observation, however, ignores the fact that banks acting in a banking system can expand their loans or investments and thus create deposits, thereby raising the

earning assets and the deposits of the individual banks to higher and higher levels. In other words, the system action takes place through the action of individual banks. This process of bank-credit expansion and its limitations will be explained in greater detail in Chapter XIV.

When an individual bank lends funds to a customer, it usually credits the checking account of that customer with the proceeds of the loan. The bank thereby creates a deposit, but the customer does not borrow the funds in order to leave the entire proceeds on deposit with the bank; he will in all probability draw checks against most of the new deposit, some of which may be deposited in other banks. Thus an individual bank must attract deposits if it is to be able to continue its lending operations.

Just what the ratio between earning assets and capital stock should be depends on numerous factors in the general business situation, which is in large part beyond the control of the individual bank. A very high ratio suggests bank-credit expansion, while a very low ratio suggests bank-credit contraction or an unsuccessful banking enterprise. The reader should have a clear appreciation concerning the relationship between earning assets and capital funds. The following illustrates this relationship succinctly: a net return of 1 per cent on a bank's earning assets yields a return of 10 per cent on capital stock, if earning assets are ten times as great as capital stock.

Reserves. — Thus far it has been assumed that a bank receives cash from deposits, capital stock, and earnings and invests that cash in loans, bonds, and other earning assets. Not all of the funds of a bank, however, are lendable funds. Banks are required by law to maintain reserve accounts with reserve depositories equal to a certain percentage of their demand and time deposits. Besides such legal reserve, every bank finds it necessary to keep some cash on hand, which does not qualify as a part of its legal reserve. The member banks of the Federal Reserve System, for example, are not permitted to count cash in vault as a part of their legal reserves. In addition to legal reserves and cash in vault, a bank may have a deposit with another bank which is also a nonearning asset. Many banks find it convenient, or necessary, to keep a deposit with a bank in New York City or another financial center. These non-earning assets make it impossible for a bank to maintain as high

a ratio between earning assets and capital funds as the ratio between deposits and capital funds. The need of funds for the operation and overhead connected with conducting a banking business and the need for holding some nonearning assets make it imperative that earning assets be several times as great as capital funds if banking is to be profitable.

Summary. — The foregoing exposition of the banking process is not an attempt to present an exhaustive analysis of a financial statement; this task is left to a later chapter. At this point the reader is asked to visualize only the basic steps in the banking process, namely: (1) the promoters of a commercial bank contribute to the capital funds of that bank; (2) the bank solicits others to deposit cash, promissory notes, etc. with it; and (3) the bank supports its deposit liabilities with (a) its earning assets, such as loans and investments, and (b) its nonearning assets, such as cash in vault, deposits in other banks, and reserves. When the ratio between capital funds and earning assets is too low, difficulties are encountered in meeting the expenses incident to the banking business. When this ratio is too high, it may be assumed that the bank in question is (1) engaging in a relatively high degree of bank-credit expansion; (2) paying out in dividends funds which should be used in building up surplus, or (3) unwilling to increase its capital stock.

THE ECONOMIC FUNCTIONS OF COMMERCIAL BANKING

Ideal banking practice. — The traditional concept of commercial banking, which has been inherited from centuries of experience, consists of the pooling of short-term funds and their diversion into short-term loans for commercial and productive purposes. This concept was evolved in Europe in the seventeenth and eighteenth centuries and has not been seriously challenged until recent years when banking trends have forced some modification. Bankers and economists have no quarrel with this time-honored concept — they still honor it as an ideal kind of banking business and regret that it is impossible to adhere strictly to it in practice. The student of money and banking today should be aware of its significance and its limitations as a working rule of modern commercial banking. Hence our present task is to examine these

limitations and to state some of the modifications of the traditional theory which are necessary if it is to square with present trends.

More complete utilization of funds. — The proposition that banks pool the temporarily idle funds of the community and invest them in short-term loans for productive purposes assumes that deposits precede loans. As a matter of fact the building up of deposits and loans is a reciprocal process, that is, each builds up the other. Looking at the banking process purely from a historical point of view, however, it must be admitted that banking began with the accumulation and safekeeping of physical deposits and later took on the function of making loans. In order to present as clear a picture of the economic functions of commercial banking as possible, let us first compare an economic system without banks with an economic system in which banks, as we know them, operate.

One of the advantages to the economic system of commercial banks is that they make possible a more complete utilization of funds. Our economic system, known as an exchange economy, is based upon the transfer of goods and services for means of payment of all kinds, which for convenience is usually called money. When goods and services are exchanged for money, not all of that money is ordinarily exchanged immediately for other goods and services. Those persons or business firms who gain money in these exchange transactions may retain a part of it for later exchanges. Individuals retain a part of it to meet future claims against them and to satisfy future desires. The same is true for business firms. Furthermore, no one can expect money income and money outgo to flow in an equally steady stream, the one exactly offsetting the other at all times. Hence, persons ordinarily find themselves in possession of funds which they do not choose to use for immediate purchases. In the absence of banks these funds would be idle.

One of the functions of the banking system is to collect these funds in the form of bank deposits and, having collected them, to put them to work by making loans for commercial and productive purposes or by purchasing investment paper, such as bonds. Of course, the individual or business firm might lend funds, which need not be expended immediately, to other business firms or individuals without the mediation of a bank. This procedure is inefficient, for the prospective lender must find a borrower willing

and able to borrow on the terms desired by the lender. The individual in possession of surplus funds is seldom in a position to do this because he may be equipped to engage only in merchandising, manufacturing, or another line of business, while a commercial bank furnishes a convenient meeting place for people with temporarily idle balances and people in need of funds for commercial or other purposes.

These temporarily idle balances vary greatly in size and also show a wide variation in turnover, that is, some depositors leave large or small amounts on deposit for relatively long periods of time without any great number of withdrawals or replacements, while other depositors make frequent large or small deposits with frequent withdrawals. In the latter case, the deposit turnover is said to be relatively high. Obviously, the prospective lenders cannot find borrowers of their idle funds each time that they are not needed by their owners. A commercial bank, however, can do so, not for individual deposits but rather for the mass of its deposits. Herein lies the significance of the pooling process. A commercial bank pools the deposits of hundreds or thousands of small and large depositors. While some depositors are withdrawing funds, others are replacing funds, and the bank has a more or less constant amount of deposit liabilities which it supports, in part, by loans to those in need of funds. The borrowers give to the bank promissory notes and other short-term instruments or long-term instruments as evidence of their debtor-creditor relationships.

It is frequently said, and correctly so, that the pooling of the temporarily idle funds of the community in bank deposits results in a double saving to the economic system. It makes available to the economic system funds that would otherwise lie idle in private vaults and also permits individuals or business firms to keep a smaller proportion of their total assets on hand in the form of cash. The net benefit to society of a banking system, therefore, is found in the difference between a situation in which individuals and business firms permit others to use a relatively large amount of their idle funds and a situation in which they must hoard a relatively large amount.

Selective utilization of funds. — Banks do more than provide an alternative to cash hoarding; they also provide organized credit facilities whereby funds are made available to those borrowers who

can use them in the most productive manner. The alternative to cash hoarding is represented in the deposit liabilities of banks; the outcome of the selective utilization of funds is expressed in the qualities and comparative size of the different forms of assets which banks accumulate.

The self-interest of bankers is ordinarily relied upon to make the selective utilization of funds as productive as possible to the economic system. Bankers usually find that the loans and investments which are most productive to the borrower are, in the long run, the safest and most profitable advances which they can make.

In the absence of banks, or a system of banks, the individual who possesses loanable funds must rely upon his own judgment in extending credit to others. A system of banks having an accumulation of experience in the business of credit extension is doubtless in a better position to arrive at wise decisions in this matter than is the individual lender. Then, too, bankers have better facilities for arriving at these judgments than has the individual lender. For these reasons banks are said to be able to divert funds from less to more productive channels.

It is to be admitted, of course, that the individual banker is not always in a position to use his best judgment in determining the most productive channels for loanable funds. He is sometimes caught in a net of circumstances which practically forces him to move in a particular direction, without much regard to the question of productivity. For example, no matter what are his personal judgments concerning the productivity of the uses to which the proceeds of government bond issues are to be applied, a banker may have no alternative when investing in government bonds. Another situation illustrates the banker's predicament. A great amount of business may be lost, temporarily at least, when an individual banker resists a further expansion of loans in the face of strong pressure from business interests to do so, although his personal judgment dictates caution in making further loans because of some doubt concerning their continuing productivity.

Certain subsidiary functions. — If it is assumed that the chief economic functions of commercial banks are to pool and put to work funds which would otherwise lie idle in the vaults of individuals and business firms and to set up machinery whereby funds are diverted from less to more productive channels, other economic

functions performed by banks might be considered subsidiary to these main functions. One of these is the transfer of funds from one region to another in carrying on domestic and foreign trade and commerce. Checks and drafts drawn on one bank are deposited in banks in other parts of the country, thereby effecting the transfer as far as the drawer is concerned. Since funds are being shifted constantly in all directions, the banking system has provided an efficient technique of handling these transfers and settling balances between banks which arise from them. The fact that the shipment of cash has been to a large extent obviated is in itself a considerable saving to the economic system. In addition, the high development of a system of settling balances has made possible a more complete utilization of funds than would have been possible if no system to accomplish this were in existence.

The same reasoning applies to foreign transactions. In this field a system of settling balances, whereby the shipment of bullion is kept to a minimum, is highly desirable. This result is achieved by the use of bills of exchange which permit a ready offsetting of claims among the banks of all countries. Great activity in international trade is difficult when inefficient and costly procedures are used. The flow of international short-term funds, presumably from markets of lesser to markets of greater demand, by which a more complete utilization of surplus funds is achieved, is a process reserved, in its more technical aspects, for later presentation.

A second function which banks must perform in order to carry out those which are more important from a broad economic point of view is the safekeeping function. The safekeeping of monies was, in the early stages of the banking development, much more important than it is today. The growth in importance of all kinds of credit instruments has minimized the safekeeping of monies, but it cannot be ignored altogether at the present time. The popularity of night depositories and the very considerable volume of safety-deposit business are evidences of the continuing importance of the safekeeping function. Then, too, the safekeeping motive is inherent in the ordinary checking account, although in this case, the thing deposited may be not only money, as that term is ordinarily used, but credit instruments of all sorts.

A third function of commercial banks, which might be considered to be incidental to their primary functions, is that of acting as fiscal

agents for the government. The deposits of government agencies are ordinarily put on a different basis from other deposits in that certain assets are segregated for their protection. This function is particularly important among central banks, but individual banks also perform this service. In the absence of banks, government agencies must maintain depositories of their own which entail expenses they do not need to bear when banks perform these fiscal services for them.

A further classification of bank functions. — The central idea in the foregoing description of the economic functions of commercial banks is found in the comparison of an economic system having organized banking facilities and an economic system not having them. It seems clear that a banking system makes possible a more complete and more selective utilization of funds through the pooling and lending process. This discussion of the economic functions of banking is, however, inadequate and somewhat faulty because it implies a certain sequence between deposits and loans, namely, that the deposits are pooled funds *diverted* to particular uses.

A fuller discussion of the banking process in the advanced rather than in the early stages of its development would show the reciprocal relationship between deposits and earning assets of all kinds. In the later stages of the development of banking, emphasis is not placed on a sequence which runs in one direction between deposits on the one hand and a particular form of asset on the other. A more important consideration is that which relates to simultaneous increases and decreases in both deposits and earning assets. A quickening in the pace of business activity results in an increase in both lending and borrowing, depositing and withdrawing, while a decrease in business activity is reflected by the opposite result.

In order to avoid the assumption of a particular sequence of cause and effect between bank assets and bank liabilities, the economic functions of commercial banks may be classified as follows: (1) On the deposit side, banks provide an alternative to currency hoarding and (2) on the asset side, they provide facilities for giving greater negotiability to the credit of their clients. These two concepts comprehend the activities of banks in the direction of pooling the temporarily idle balances of the community, the selective utilization of funds, the safekeeping of funds, and the transfer of funds. The pooling of funds in banks is the alternative

to hoarding. The rendition of negotiability by banks to the property of their clients makes that property generally acceptable. Negotiability is given, not to all property but to portions of it selected by bankers. These claims (negotiable instruments) enter into the clearing system where they, in large measure, offset each other. They can offset each other at a high-dollar or at a low-dollar volume. Banks ordinarily stand ready to give negotiability, on the initiative of their customers, to a high or to a low volume of credit, depending chiefly on the business outlook. In other words, the banking system provides the facilities for and renders an account of the repetitive procedures which characterize the relationship between the public and the banks. It is essentially a process of "social bookkeeping."

THE ABANDONMENT OF THE IDEAL BANKING PRACTICE

The traditional theory of commercial banking requires banks to invest their funds in short-term loans for commercial and productive purposes. According to this rather strict interpretation of the "ideal banking practice," the supply of bank deposits and other currency should expand and contract according to the state of trade. There is no place in this concept of commercial banking for a close relationship between the deposits of banks and their investments in bonds. In recent years, a close relationship between investments and deposits has developed. It cannot be said, however, that the traditional idea has been entirely displaced; neither has it been completely invalidated; rather, it has been partially forsaken. In succeeding paragraphs we shall trace briefly the decline of commercial banking and try to arrive at a conclusion with respect to it or an attitude toward it.

The decline of commercial banking. — Numerous attempts have been made in the history of banking in the United States, by means of legislation, to protect the commercial aspects of commercial banking. This was especially true prior to the World War. The National Bank Act of 1863, and subsequent amendments to it, placed numerous restrictions upon loans used for other than commercial purposes. National banks under this act were, for example, restricted in their power to grant real estate loans. The Federal Reserve Act of 1913 liberalized somewhat the

legitimate activities of the member banks in this respect and yet forbade the rediscounting of any except short-term paper arising from productive, commercial transactions. In other words, the Federal Reserve System was originally designed to support the commercial functions of the member banks.

The World War profoundly affected banking practices and trends. The necessities of financing the war forced into the foreground the fiscal functions of the Federal Reserve banks, that is, they become largely the agents of the Treasury in the flotation of government bonds. The commercial banks made numerous loans to individuals, the proceeds of which were used to buy government bonds. These bonds, in turn, served as security for the loans. In addition to receiving large quantities of bonds as collateral for loans to customers, the banks of this period invested heavily in government bonds and were forced later to foreclose in many instances on the bond collateral offered on individual loans. Although commercial loans also reached a high level during the period of wartime inflation, the trend away from commercial banking in the United States was established and, it may also be said, the public in general became "security conscious."

In the period immediately following the World War, an inflation set in which was characterized, in part, by a very considerable speculation in inventories in the industrial sections of the country and by land and real estate booms in both urban and rural areas. The price level continued to advance throughout 1919, inducing manufacturers to build up inventories of raw material and wholesalers and retailers to build up inventories of finished goods to high levels. Anticipation that prices would go still higher encouraged this movement. The aspect of this situation which is pertinent to the present topic is that many bank loans which appeared to be commercial loans were in fact speculative loans, that is, loans to support commodity speculation. Real estate loans also were greatly increased in this period of postwar inflation, especially by state banks, which led national banks to clamor for liberalization of restrictions upon their ability to grant similar loans. Hence, the year 1919 was characterized by a continuation of the tendency away from commercial banking. During that year financing by the Treasury continued with the flotation, through the aid of the banks, of a huge postwar bond issue, called Victory Bonds.

A short period of deflation set in during 1920 as the price level began to decline from its high peak of May, at which point it reached 246, with 100 representing the 1913 level of wholesale prices. By 1923, it was apparent that the deflation had run its course and that a new period of expansion was developing. Instead of being founded upon government financing and commodity speculation, this new development was based on the flotation of corporate securities and loans on securities. Most corporations, especially the larger ones, found it unnecessary to borrow from banks for commercial purposes since they could utilize their large wartime profits and obtain new funds from the capital markets to finance current operations and plant expansion. The bond market enjoyed unusual activity in the earlier years of this new industrial expansion and numerous huge consolidations of business enterprises were effected by the financial geniuses of the time. Financiers preferred bonded indebtedness to bank loans because much of the new financing was of a long-term character. Commercial banks, following the trends in general business, invested heavily in corporate bonds.

Later, especially in 1928 and 1929, the capital markets favored equities and a tremendous stock-market boom developed. The preference by business management for common stocks rather than bonds is readily understood, for stocks entail no fixed obligation and no maturity problem. Following current business practice, the commercial banks turned to security loans which were granted in large volume. By the end of 1929 loans to brokers and others on securities had become the largest class of bank loans. They exceeded both the so-called commercial loans of banks and the total of their holdings of government and other bonds. In fact, banks freely disposed of bonds in order to increase their loans on securities.

The vicious character of this situation was proved by subsequent events. These loans were liquid only so long as there was no widespread desire to liquidate them. From the point of view of the banking system, shiftability of bank assets is not harmful in itself so long as outlets exist for the disposal of those assets with little or no loss. When the stock-market crash came in October 1929, the banks could not liquidate these security loans in any great amount without making the situation much more serious. After a temporary upturn in the stock market, the decline set in again

and the banks, in self-protection, could adopt no other policy than that of forcing their customers to sell their collateral and pay off their indebtedness.

At the beginning of the deflationary movement between 1929 and 1933, banks returned to their previous policy of buying bonds, but the banking system had been so weakened that depositors lost faith in the safety of their banks and withdrew their deposits to such an extent that all types of bank assets suffered a tremendous decline. About 10,000 banks were forced into involuntary receivership due, in part, directly or indirectly, to an unwarranted dependence upon security loans.

Some reasons for the decline of commercial banking. — The reasons for the trend which has been cited are not to be found in a change of policy, carefully planned by commercial bankers in general. On the contrary, the shortage of commercial loans can properly be attributed to changes in business policy and organization and to changes in government financing to which the commercial bankers were forced to adapt their policies.

The growth of business firms to large-scale units and the development of huge capitalistic combinations have resulted in a situation in which the commercial banker no longer occupies the same strategic position he once occupied. Most large business firms today seldom find it necessary to apply for credit at commercial banks when they need raw materials. These large business units ordinarily possess the necessary cash balances to meet their need for funds for most short-term purposes. Cash balances, while awaiting employment in the regular course of business, may be invested in long-term securities either by the firms themselves or by the bank holding the deposit. Consequently many business firms, especially the larger ones, perform for themselves some of the functions that might be performed by commercial banks, that is, they draw upon their own cash balances to meet current needs and give to the banks a considerable amount of commercial business only during periods of unusual need for short-term funds.

It is also interesting to observe the part which the development of speedier transportation and increased standardization in production have played in the decline of the commercial phase of banking. While transportation was slow, business firms found it necessary to store greater quantities of raw materials and finished-goods inven-

tory, in proportion to their total sales, than they stored later when transportation was speedier and hand-to-mouth buying became a satisfactory business policy. Increased standardization increased the speed of production and reduced inventories, both raw materials and finished goods. In each instance the amount of bank credit needed again became smaller in proportion to the total volume of sales.

Another reason for the decline in the commercial phase of banking is to be found in the increased activities of government agencies, both federal and local. Whatever the reasons for this development might be, it is quite obvious that when banks buy larger quantities of government bonds, they relinquish to the government one of the functions which the banks might have performed, namely, the selective utilization of loanable funds. The question which then arises relates to the productivity of the uses to which the government puts the funds compared with the productivity of the uses to which the banks might have directed the funds.

It must be admitted that government bonds as bank assets possess some peculiar merits. This fact, however, should not divert attention from the present theme — that inordinately large holdings of government bonds violate the traditional theory of commercial banking. This is true from the standpoint of the banking system as well as from the viewpoint of the individual bank because the central bank may be compelled to adopt policies primarily with a view to supporting the bond market to the partial exclusion of policies designed to support commercial, productive processes.

Is the traditional theory tenable? — The traditional theory of commercial banking functions cannot be adjudged to be wholly right or wrong. Lest the impression be given that this chapter is an argument for strict adherence to the traditional theory, it should be stated clearly that this is not its intent. Rather, its purpose is to show that banking practices and policies follow the practices and policies of business and of government. No moral or ethical connotations are implied.

The changes that have taken place and that are taking place in American banking are characteristic of the changes in the economic system as a whole. Perhaps these changes may best be described by saying that we are moving away from a dependence upon automatic adjustments by means of changes of prices, wages, interest

rates, etc. as determined in free, competitive markets. Greater reliance is being placed on conscious controls and less reliance on the operation of *laissez-faire* mechanisms. Automatic corrective forces are not allowed to set in when such forces are painful to any important segment of the population. We try often to protect those people by numerous so-called artificial or unnatural controls. Some persons might say that in the long-run these forces will doubtless exert themselves. This may be stated as a generalization, yet we know that political expediency does not usually permit waiting for some beneficent result from these long-run forces. Hence policies of control are made up of a series of short-run expediciencies, which may be as long in the aggregate as the long-run forces.

Numerous examples in many fields might be given to show the present-day lack of reliance on automatic adjustments in solving economic disturbances. The field of banking furnishes such an example. In recent years banks have accumulated such huge holdings of government bonds that a relatively small decline in the market value of those bonds necessitates strong and prompt action to prevent a serious decline in the liquidating value of their total assets. When, therefore, the market prices of government bonds decline, government and central bank policies are exerted to prevent a further decline, while a pure *laissez-faire* policy would let them seek their natural levels.

We have described the tendency toward a decline in the strictly commercial operations of commercial banks in recent years and the rise of other operations to relatively greater significance. Both the prosperity and depression phases of recent business cycles have contributed to this tendency. Perhaps a return to traditional commercial banking will manifest itself in the near future. If so, less emphasis than we have given it might have been placed on the evident inability of commercial banks to conform to traditional concepts. A period of time, disconcertingly long to the adherents of traditional principles, has elapsed without a return to them. We must conclude, therefore, that a realistic approach to the study of money and banking cannot be built upon the assumption that only short-term, commercial loans are used to support commercial bank deposits.

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CHAPTER VI

EXPERIENCES WITH BANKING IN THE UNITED STATES

Banking in Europe. — When stamped pieces of metal began to displace commodities as media of exchange, a need for specialized financial services arose. Money-changers appeared in the market place to exchange the variegated mixture of full-weight, clipped, or sweated foreign and domestic coins. But the money-changer was of little assistance to the merchant if payments had to be made for imported wares in a distant town or country. Sometimes foreign money could be bought at home and shipped to the exporter, but such a procedure was cumbersome, expensive, and fraught with the danger of loss. At times, too, legal restrictions existed which forbade the exportation of specie. Merchants in many instances avoided expenses, danger, and the law, by shipping staple commodities in place of money because they were readily acceptable and could be easily disposed of at the place of destination. The proceeds of the sale furnished the means of making the payment. To facilitate convenient and efficient payment, commercial instruments including a forerunner of the modern bank check, promissory notes, and bills of exchange were in use quite early.

In ancient Greece and Rome banking practices attained a fairly high development. Deposits were received by bankers; foreign and local coins were exchanged; money temporarily entrusted to them was lent on interest; and transferable deposit slips passed readily from hand to hand, leaving the specie with the banks, thereby enabling them to make loans. The collapse of Rome and its institutions eliminated the need for banking facilities and it was not until the fourteenth century, when trade began to flourish in the northern cities of Italy, that bankers again rose to prominence.

Deposit banking in Italy. — Banking in the Italian city-states was the logical development of the ever-increasing volume of trade. Capital accumulated in the hands of moneylenders and temporary

surplus funds were often turned over to them by businessmen for lending purposes. Deposit slips, showing specie to be on deposit with the moneylender, circulated readily as a means of payment. This use of credit, however, did not arise from any desire to substitute credit in order to economize on available specie, but from the simple fact that the transfer of the deposit slips eliminated the cumbersome and costly necessity of counting coins and their delivery in every business transaction. To create credit, known today as bank credit, without depositing a corresponding amount of specie was a violation of the law. Despite legislative restrictions, however, moneylenders created credit without specie as a foundation. As these private banking institutions developed into banks of issue, insolvencies frequently occurred.

As a result of frequent financial failures, Venice established a public bank in 1587 under a governor appointed by the Senate. While authorized by charter to receive cash deposits subject to call, the bank could make no investments with entrusted funds. Transfers of deposits could be effected only in the presence of the depositor or upon his written order to the state bank inspector. The extension of credit was forbidden.

Discount and deposit banking in England. — The banks in existence on the continent, at least up to the sixteenth century, performed a series of functions which today would not be termed "banking." They rendered services similar to those of the modern assay office. At the time, a tremendous volume of clipped, sweated, and worn coins was in existence. It was often almost impossible for an individual merchant to obtain a sufficient amount of good (full-weight) money to meet maturing obligations, so that such obligations were frequently traded at a considerable discount. To remedy this condition, banks were chartered. Adam Smith describes the functions of the Bank of Amsterdam, which was established in 1609 and which was typical of these early European banks, in the following words:

This bank received both foreign coin and the light and worn coin of the country at their real intrinsic value in the good standard money of the country, deducting only so much as was necessary for defraying the expense of coinage, and the other necessary expense of the management. For the value which remained, after this small deduction was made, it gave a credit on its books. This credit was called bank money, which, as it represented money exactly according to the standard of the Mint, was always of the same real value, and intrinsically worth more than current money. It was at the same time enacted,

that all bills drawn upon or negotiated at Amsterdam of the value of six hundred guilders and upwards should be paid in bank money, which at once took away all uncertainty in the value of those bills. Every merchant, in consequence of this regulation, was obliged to keep an account with the bank in order to pay his foreign bills of exchange, which necessarily occasioned a certain demand for bank money.¹

It was England which introduced modern banking to the world. Prior to the establishment of the Bank of England in 1694, the goldsmiths acted as depositories for temporary surplus funds. Since they were dealers in gold and silver bullion and coins and needed strongboxes for their own business, it was quite logical that they should be requested to keep money and valuables of other persons. At first, some charge was probably made for supplying this service. Eventually they attracted deposits by paying interest, and made collections and payments for their depositors. They could afford to pay interest since money did not lie idle in their vaults, but was lent out. An essay, which appeared in 1676, entitled "The Mystery of the New Fashioned Goldsmiths or Bankers," contains an interesting description of these early banks of discount and deposit:

Having thus got money into their hands, they presumed upon some to come as fast as others was paid away, and upon that confidence of a running Cash (as they call it) they began to accommodate men with moneys for Weeks and Months, upon extraordinary gratuities, and supply all necessitous Merchants that overtraded their Stock, with present Money for their Bills of Exchange, discounting sometimes double, perhaps treble interest for the time, as they found the Merchant more or less pinched.²

As the demand for financial services increased, coincident with an increase in the volume of productive and commercial transactions, many goldsmiths ceased to ply their original trade and turned bankers. Some of them floated their own debt — the beginning of modern banking. When, in 1672, Charles II confiscated money belonging to the goldsmiths, which they had deposited at 8 per cent with the Exchequer, banking development came temporarily to a halt. But twenty years later, the Crown was again in need of funds and upon the advice of a Scotch adventurer, William Paterson,

¹ Smith, Adam, *An Inquiry into the Nature and Causes of the Wealth of Nations*, Book IV, Chap. III.

² Quoted by Day, Clive, in *A History of Commerce*, p. 151. New York: Longmans, Green and Company, 1929.

offered the loan for public subscription. To assure the success of the flotation, a grant of incorporation was to be given to the subscribers authorizing them and their successors to carry on a banking business. The subscribers to the loan founded the Bank of England in 1694. Two years later, the charter was amended to entitle this bank to issue notes payable to the bearer on demand, establishing for the first time a true bank-note circulation. It also received a right of "exclusive banking."

Other European banking practices. — This book does not permit a description of banking such as was carried on by such truly international houses as the Peruzzi and Medici in Italy or the Fuggers in Germany. The importance of these private bankers is revealed by the amount of their capital which, in the case of the Fuggers, was \$40,000,000 by the middle of the sixteenth century. The collapse of these banks was inevitable as they lacked the permanence of a modern corporation and as family affairs were exposed to family altercations. Since all classes of the community were in the habit of depositing monies with these private bankers, bankruptcies acted as tremendous setbacks to a struggling commerce. After the decline of the Fuggers and similar enterprises, potential borrowers turned to the Antwerp and Amsterdam exchanges for funds.

Another interesting chapter in the development of European banking centered around the activities of John Law, the son of a Scotch goldsmith, who, in the late seventeenth and early eighteenth centuries, strove to have adopted in many European countries the monetary doctrines he elaborated. As an avowed mercantilist, he would have had the national government pursue policies which would give it a goodly stock of treasure, but he would allow such treasure to accumulate in the state's treasury and issue paper money to take the place of metallic money in the transactions of the public. In 1716 he persuaded the French government to adopt his project, and there subsequently took place the formation of the *Banque Générale* and, later, the *Compagnie des Indes*. Law was given general control of finances and used his power to issue notes to accomplish the redemption of the public debt in 1719-1720. This action and a hasty attempt at remolding the entire political and social, as well as the economic, structure of France, resulted in a very severe inflation. In less than a year the whole system broke down and caused, together with Law's own ruin and his flight from France,

the panicky destruction of many speculative ventures. He, nevertheless, materially reduced the debt service and also encouraged physiocratic ideas, for the only type of property which appeared to have remained intact in the severe deflation which followed his ventures was land.

EARLY BANKING HISTORY OF THE UNITED STATES

Colonial banking. — While banking continued to develop in Europe throughout the seventeenth and eighteenth centuries, the evolution of banking along distinctly American lines took place in the same period in the American Colonies. Francis A. Walker has characterized colonial banks as "simply a batch of paper money." Very frequently, whether privately or publicly organized, these banks had no permanent place of business nor any special resources set up for the redemption of notes. They often lacked property of any description to pledge as security for the credit extended. The most notable attempt toward private banking was made in Massachusetts as early as 1714 when banks were established with land as security. The capital of these banks was raised in the following manner: loans were made, the proceeds of which were paid in bank notes issued against satisfactory mortgage security. These notes were used by persons to whom they were issued to meet their stock subscriptions. Other than that loaned by the banks, 40 shillings out of each £1,000 subscribed had to be paid in cash. No agreement for the redemption of notes was made.

From our point of view, it is easy to condemn such practices; however, one should remember the lack of specie in the Colonies, which deficiency necessitated the use of other forms of money. While land under some circumstances may be adequate security for *ultimate* redemption of notes, it cannot be used as immediate redemption. Keeping such issues at par with the other circulating media could have been effected only by making notes redeemable in specie on demand.

Several of these colonial experiments in the field of note issue were rather successful, however. In 1722, Pennsylvania established a loan office authorized to issue and lend bills of small denominations with land at double the value lent as security. Since the lack of currency increased the hardships suffered as a result of the prevailing depression, the notes were readily accepted. Moreover, no

excessive amounts were issued and adequate revenue from taxation existed for the support of the colonial government.

Unfortunately, the success in a few of the Colonies encouraged others to attempt to solve their financial problems by indiscriminate note issues of private land banks without perceiving the reasons for the success. Conditions eventually became so bad that, upon the complaints made by colonial merchants, Parliament prohibited the issuance of bills of credit in New England in 1751 and extended this prohibition to the remaining American Colonies thirteen years later.

The First Bank of the United States. — At the time of the establishment of the First Bank of the United States in 1791, only three banks were in existence in this country: the Bank of North America in Philadelphia, the Bank of Massachusetts in Boston, and the Bank of New York in New York.

Alexander Hamilton, the first Secretary of the Treasury, regarded the establishment of a national bank as necessary to the orderly conduct of American financial affairs. He alleged the advantages to be derived from a government-chartered bank to be: an increase of capital through an enlargement of notes in circulation; more favorable facilities for the government to obtain loans; greater ease for the individual to pay his taxes to the government as he would have better opportunities to borrow; and an increase in the amount and the circulating velocity of notes. The act of incorporating the institution was opposed, however, in the House of Representatives on the basis of lack of authority under the Constitution. Even in the President's cabinet there was considerable disagreement as to the advisability of creating such a bank. Despite Jefferson's arguments that the word "necessary" in the clause of the Constitution giving Congress the power "to make all laws necessary and proper for carrying into execution the enumerated powers" did not give power to Congress to create a bank, Washington believed in the pending bill's constitutionality and signed it on February 25, 1791.

Provisions of the charter. — The First Bank of the United States was established in Philadelphia, with a capital stock of \$10,000,000, of which the government subscribed one-fifth. This amount was to be borrowed from the bank and was repayable in ten annual instalments. The remaining \$8,000,000 was open to public subscription,

payable one-fourth in specie and three-fourths in 6 per cent government bonds. Individual subscriptions were limited to \$400,000.

The management of the institution was entrusted to a board of twenty-five directors elected by the stockholders; all directors were required to be stockholders of the bank and citizens of the United States. As no shareholder could cast more than thirty votes irrespective of the size of his holding, the small holders were favored. Foreign stockholders were not permitted to vote by proxy; nevertheless, due to the lack of domestic capital, approximately two-thirds of the capital was placed abroad. Not more than three-fourths of the directors were eligible for re-election the following year.

Authorization was given to carry on ordinary banking functions, namely, to receive deposits, make loans at not exceeding 6 per cent interest, issue notes, and act as fiscal agent for the government. The note issue was limited to \$10,000,000. The bank could not hold real estate outside its own quarters, but could extend loans on real estate as security. No loan exceeding \$100,000 was to be made to the government without congressional authorization. Branches could be established at the discretion of the board of directors. The bank might dispose of its own government bonds, but was prohibited from trading in government securities. The charter was to expire, unless renewed by Congress, on March 4, 1811.

The record of the bank. — The First Bank of the United States was a success from the start. By 1811, eleven branches provided a means of control over the rapidly growing number of state banks. In 1790, there were 3 state-chartered banks; in 1800, 28 with a capital of \$21,300,000; in 1811, 88 with a capital of \$42,600,000. As long as the United States Bank existed, a certain amount of regulation over the note issues of the state banks was exercised. With the rapidly growing number of state banks, deposits in and payment to the national bank included a considerable amount of state bank notes. The First Bank of the United States sent these notes back to the issuing banks for redemption in specie, thus effectively checking the amount of state bank notes in circulation. Since the notes of a state bank refusing to redeem its notes in specie on demand were not accepted by the national bank, the state banks were forced to limit their issues in order to remain on a specie-paying basis.

The other functions of the Bank of the United States included: (1) the extension of discount privileges to private individuals; (2) the facilitation of foreign trade by aiding importers in their payment of customs duties; (3) the issuance of notes, and (4) the duty of acting as the fiscal agent of the government.

At the turn of the century, the government experienced difficulties in paying back to the national bank the original loan of \$2,000,000 which had enabled it to subscribe to the capital and proceeded thereupon to sell its shares. By 1802 the last of the government-owned stock had been disposed of (at a profit of \$671,860 in addition to \$1,101,720 in dividends received), so that thereafter the institution was privately owned and operated.

The end of the bank. — In 1808 the directors of the First Bank of the United States applied to Congress for a renewal of the charter. Secretary of the Treasury Gallatin recommended the renewal in somewhat modified form. He felt that the institution had been "wisely and skillfully managed," but suggested that the charter might be modified so that all stock, which he proposed to increase to \$30,000,000, might be held at home. A refusal on the part of Congress to approve the rechartering, he warned, would bring about great transfer difficulties, as more than \$7,000,000, constituting foreign holdings, would have to be remitted abroad.

In the ensuing debates, Congress was told by some of its own members that the destruction of the bank would result in doubling the quantity of state bank notes. References were made to the mounting applications for charters to new state banks, which were regarded as evidence of a destructive speculative spirit overwhelming the country. Additional state banks would increase the volume of irredeemable paper. The state banks wanted to see the Bank of the United States eliminated chiefly for two reasons: (1) they hoped to obtain the government deposits for themselves and (2) they wanted to rid themselves of the institution which had forced them to adhere to sound banking principles. There were also the ubiquitous spoilsmen who anticipated large personal gains from the special state charters. Finally, the fact that members of the administration found merit in this original Federalist invention was enough to cause the Republicans, who held a grudge against the administration, to fight it. In February 1811, by the deciding vote of Vice-President Clinton to break a 17 : 17 tie, the bill for

renewal was lost in the Senate after having been previously defeated in the House by a vote of 65 to 64. This refusal on the part of Congress to recharter the bank forced the government to use local banks as the custodians for its funds; in 1812, twenty-one of these institutions were so employed.

State banking from 1811 to 1816. — Events subsequent to the dissolution of the bank proved the accuracy of the predictions concerning the dire results of such congressional action. At the outbreak of the War of 1812, Congress issued \$36,000,000 in treasury notes, preferring note issue to an imposition of taxes. The number of state banks trebled, with a consequent flood of irredeemable notes. The capital of these banks was largely fictitious as they had been organized on a mere promise-to-pay of the subscribers. The new credit demands of the war and the lax credit system employed in selling western lands led to inflation. After the suspension of specie payments, in 1814, the government accepted state bank notes in the payment of public dues, further stimulating these issues.

Under such conditions it was inevitable that the country would be drained of specie, a situation aggravated by the export of the \$7,000,000 which had been invested in the Bank of the United States by foreigners. The Middle-West and the South especially felt the drain, so that when Washington was captured by the British in 1814, all banking institutions, with the exception of the conservative New England banks, were forced to suspend specie payments. The government lost heavily. Between 1814 and 1817 the loss from poor or worthless bank notes amounted to more than \$5,000,000. Conditions were so disordered that fiscal operations were greatly impaired by the necessity of keeping four different accounts in four different standards of value: cash and local currency, interest-bearing treasury notes, noninterest-bearing treasury notes, and special deposits.

Second Bank of the United States, 1816-1836. — In the autumn of 1814 Secretary of the Treasury Dallas, in response to a communication from Congress, transmitted a report strongly recommending the organization of another national bank. In the various attempts of Congress to frame a new banking measure, three issues stood out: (1) the government's need of a bank to assure it financial support in time of need, (2) a fear of government

participation in banking, and (3) the necessity for control and regulation over note circulation of state banks. After much wrangling, President Madison signed the bill creating, for another period of twenty years, the Second Bank of the United States on April 10, 1816.

Provisions of the charter. — As far as the note issue was concerned, circulation was limited to the bank's total capital of \$35,000,000; the notes were payable in specie upon demand and receivable in the discharge of all payments due the government. In regard to the capital account, four-fifths was to be subscribed by private individuals and one-fifth by the government. Five of the twenty-five directors were to be appointed by the government. The bank was to act as fiscal agent for the government and the deposits were to be made with the bank, unless the Secretary of the Treasury should otherwise direct, in which event a report was to be made to Congress giving the reason for such departure from the customary procedure. No loan was to be made to the federal government in excess of \$500,000 or to a state beyond \$50,000. In return for the charter, the bank was to pay \$1,500,000 to the United States for its franchise, and the government, in turn, agreed to establish no other bank under federal charter, except in the District of Columbia.

The record of the bank. — During the first year of its existence, the bank was badly managed. Charter provisions were violated and local banks were oppressed through its numerous branches. Only one-third of the capital had been paid in specie as required and, instead of government stock, the remainder of the capital was subscribed in the personal I. O. U.'s of the stockholders. All types of illegal speculations were carried on; even the bank's officers engaged in speculation in its stock. Note circulation continued on an unsound basis; specie still was at a premium. The branches in the South and West extended loans very freely and as the notes issued on such loans were redeemable in those sections of the country, the capital of the bank was diverted to regions with a noticeable lack of commercial stability. The moment the directors saw the trend, they ordered curtailments in credit accommodations. As the country was still struggling to recover from the effects of the War of 1812, the deflationary effect of the bank's action brought about further difficulties culminating in the failure of the Baltimore branch. Congress threatened to revoke the charter. Fortunately,

a sound businessman by the name of Langdon Cheves became its president. He succeeded in reducing the note issue from \$8,339,000, in 1818, to \$4,361,000, by 1823.

This rapid deflation of notes led to another change of management when the rather conservative Cheves was succeeded by the more progressive Nicholas Biddle who sought to increase note circulation without danger. To accomplish this, he encouraged the use of domestic bills of exchange and bank drafts. Without this, the note issue could not have been greatly and quickly expanded since, under the charter, only the president and the cashier of the parent bank could sign the notes of branches. Congress refused to permit branch officials to sign notes so that Biddle was forced to accomplish his goal by means of bank drafts for even sums of \$5, \$10, or \$20, drawn by a branch upon the parent bank, payable to an officer of the bank and upon endorsement payable to bearer. Under Biddle's management the national bank attained its highest success. Branch activities were closely supervised. State banks were forced to adhere to specie redemption and, hence, to a limitation of their notes because such notes might be returned to the issuing bank for redemption. The bank's services as fiscal agent for the government were exceedingly well rendered. For ten years, from 1823 to 1833, the bank was an unquestionable success. Any question concerning the legality of the bank had finally been decided in its favor by Chief Justice Marshall in the famous case of *McCulloch versus Maryland* in 1819.

The end of national banking. — Antagonism against the Second Bank of the United States had, however, been mounting for some time. Marshall's decision ("the power to tax involves the power to destroy") forbidding states to tax the bank's branches, had aroused considerable ill-feeling. The bank's control over the inflated note issues of state banks had made lasting enemies. In 1830, Marshall declared (*Craig versus The State of Missouri*) that certificates issued by state loan officers and receivable for tax and other payments were unconstitutional. This decision excited widespread resentment in the South. Finally, the revival of Jeffersonian democracy brought with it an open fight against monopolies, and an advocacy of the return to the principles of the Fathers of the Constitution. Jackson's first message to Congress affirmed his belief in the unconstitutionality of the law creating the bank and con-

tained the open accusation that under its administration a sound and uniform currency had not been established. In 1832, Jackson addressed Congress in the following words:

Is there no danger to our liberty and independence in a bank that in its nature has so little to bind it to our country? The president of the bank has told us that most of the State banks exist by its forbearance. Should its influence become concentrated, as it may under the operation of such an act as this, in the hands of a self-elected directory, whose interests are identified with those of the foreign stockholders, will there not be cause to tremble for the purity of our elections in peace, and for the independence of our country in war? ³

The impression made by Jackson's attitude toward the bank upon politicians and the people can hardly be overestimated. Congress passed a bill for a modified renewal, but was unable to pass the measure over Jackson's veto.

Jackson's prejudice against the bank sealed its doom. When Biddle, in his attempt to maintain an easy money market, advised, in 1832, against the immediate liquidation of the 3 per cent debt and agreed to pay interest on the treasury funds in the bank for this purpose, Jackson shouted: "I tell you, sir, she's broke. . . . The bank's broke, and Biddle knows it." In self-defense the bank had to contract its activities since it was now evident that the charter would not be renewed. Jackson had ordered, in 1833, the withdrawal of government deposits from the bank, depositing funds in certain state banks, the so-called pet banks. The national bank had to follow a policy of contraction in order to pay these deposits and this caused it to wind up its affairs. The charter expired on March 3, 1836, but the bank continued operation under a charter from the State of Pennsylvania. It eventually failed.

STATE BANKING FROM 1836 TO 1863

The increase in state banks. — For a period of almost thirty years, from 1836 to 1863, state banking had a free field for expansion without any interference on the part of the federal government. During these years banking conditions were less satisfactory than at any time since the establishment of the Constitution. The number of state banks rose from 506 in 1834, to 1,466 in 1863; nominal capital stock, during the same period, rose from

³ Quoted by Dewey, Davis R., in *Financial History of the United States*, p. 203. New York: Longmans, Green and Company, 1934.

\$200,005,944 to \$405,045,829. A typical example of wildcat finance is afforded by the State Bank of North Carolina, incorporated at \$1,600,000. During an investigation it was revealed that the bank had less than \$1,000 in specie in its vaults.

Jackson's successor, President Van Buren, considered it most unwise to force the federal government to deposit funds in state banks, a condition that had led to rash credit expansion for highly speculative ends. To enable the government to take care of its own funds, an independent treasury bill was enacted in 1840, only to be repealed one year later by President Tyler. Had President Harrison lived longer, the Third Bank of the United States might have been established, since several bills with this intent were passed by Congress only to be vetoed by President Tyler.

The capital of the banks. — The state-chartered banks frequently began business with only 5 per cent of their capital stock paid in, the remainder being in the form of promissory notes of the stockholders. When due, these notes were usually renewed so that the practice of paying in capital by borrowing at the bank was firmly entrenched. Banks about to open would often borrow cash from neighboring institutions in order to make an impression upon prospective customers on the opening day; this money would be returned after the opening.

The note issue. — Generally speaking, there was little or no limitation or regulation of note issues. The specification that a bank's notes could not exceed an amount equal to three times its capital stock was meaningless in view of the afore-mentioned practices. Usually no provision was made for redemption nor was there any penalty for nonredemption. Various means were employed to discourage and effectively to prevent the presentation of the issuing bank's notes. A bank in Georgia conditioned redemption upon an oath rendered in the bank before the local justice of the peace and in the presence of five directors and the cashier to the effect that the person presenting the notes for redemption was the owner of the notes and not acting in behalf of someone else. Riots in Ohio in connection with the failure of the Miami Exporting Company caused the state legislature to pass resolutions attempting to force specie payments of banks, or their liquidation.

The inevitable result of such a situation was the circulation of all types of counterfeits. "Counterfeit Detectors" were regularly pub-

lished to caution the public. One of these lists, published in 1839, contains the names of 54 banks that had already failed on several occasions, 20 fictitious banks whose notes circulated, 43 other banks for whose notes there was no sale, 254 banks whose notes had been counterfeited or altered, and 1,395 descriptions of counterfeited or altered notes, supposed to be in circulation, in denominations of from \$1 to \$500.

In view of the lack of a central redemption agency, a bank's notes would circulate in other sections of the country at a discount. But since they were accepted at a smaller discount by the public than by the respective local banks, they tended to remain in circulation. As a result, the circulating medium consisted of a tremendous variety of note issues. Some of these were good; others were bad because presentation for redemption, which would have acted as a check on overissue, was entirely absent. In connection with the unsatisfactory note issue, another evil arose in the form of unsound lending policies. In order to force the notes into circulation, long-term loans were granted without any consideration whatsoever for the uses to which the borrowed funds were put. A good many of the loans were unsecured and indefinitely renewable so that notes were not presented to the banks in repayment of the original indebtedness. This eliminated one means of retirement of notes.

A number of other practices rendered conditions more bewildering. For example, so-called post notes were issued, payable at some specified future date. The future payment date was usually printed in fine letters to deceive the general public as to their true status. When laws were enacted to stop the circulation of post notes, loans were made under the condition that the notes paid out as a result of the loan were to be placed in circulation at a certain distance from the bank's domicile or retained for a certain length of time by the borrower before being put into circulation. Another factor causing confusion was that some notes were employed as collateral for loans at other banks. Furthermore, many banks were known to have paid over their counters the notes of other banks at par, although they would receive them only at a discount.

In passing judgment on the monetary and banking practices of this period, consideration should be given to the fact that the United States was still predominantly agricultural. Most of the

people were unaccustomed to deposit banking, and many persons who lived some distance from banking facilities preferred a form of credit which did not require recourse to a bank. Although it is unfortunate that banking did not develop along sounder lines, banking developments of the period in question were coincident with social, political, and economic conditions.

State supervision of banking. — The abuses of banking described above could not have occurred had charters and supplementary legislation contained regulatory provisions. In some states, for example Michigan, the work of the official bank commissioners in checking the amount of specie on hand was rendered valueless because the boxes and bags of specie were transferred from institution to institution, performing a continuous service as reserve.

In many instances, state governments themselves subscribed to the stock of banking institutions because they felt that the government had a right to share in the profits and that through stock-ownership the state could exercise pressure toward sounder management. With the possible exception of the Bank of Indiana, this theory proved to be fallacious. Even where legislation was enacted to define the banks' sphere of action or security for note issues, inadequate supervision or examination rendered such legislation rather ineffective.

The Suffolk banking system. — In contrast to the western states where losses through bank failures had been considerable, the New England banks were, on the whole, soundly managed. Nevertheless, the bank-note situation there was also exceedingly unsatisfactory. Since the local banks would and could accept out-of-town notes only at a discount, they experienced great difficulties in keeping their own notes in circulation alongside the out-of-town notes. People having payments to make at a local bank preferred to use the notes of that bank for such purposes and to use the notes of out-of-town banks that came into their possession for ordinary trade purposes, because these were accepted by their local bank only at a discount. Boston banks, for example, were unable to prevent the circulation of the country banks from displacing their notes in their own city. To change this situation, the Suffolk Bank, in cooperation with the other Boston banks, began to collect the country banks' notes systematically and to send them to the issuing

banks for redemption in specie. The country banks denounced this action as the "Six-Tailed Basha" and the "Holy Alliance."

The fight between the Suffolk Bank and the country banks was bitter until the following agreement was reached between country and city banks: Each bank was to place a permanent deposit with the Suffolk Bank of \$2,000 and upwards, free of interest, the amount depending upon the capital and business of the bank. In consideration of such a deposit, the Suffolk Bank was to redeem all the notes of that bank which might come to it from any source and to charge the redeemed notes to the issuing bank once a week, or whenever they amounted to a certain fixed sum. Each country bank was to keep a sufficient amount of funds to its credit, independent of the permanent deposit, to redeem all of its notes which might be presented to the Suffolk Bank. The latter bank was permitted to charge interest whenever the amount redeemed exceeded the funds to its credit; if at any time the excess should be greater than the permanent deposit, the Suffolk Bank reserved the right of sending the notes home for specie redemption. Whenever the Suffolk Bank received from any bank for which it had opened an account the notes of any New England bank in good standing, the Suffolk Bank was obliged to receive them at their par value.

By the middle of the century, the impression that this business was exceedingly profitable became more fixed. In a revival of the old city-country antagonism, the country banks formed, in 1855, the Bank of Mutual Redemption to take over the function of a note clearing house. Three years later, the Suffolk Bank retired from the field, leaving the entire business to the mutual clearing association.

The New York Safety-Fund System. — Besides New England banking, there were a few other bright spots on the otherwise gloomy horizon of American banking. One of these was in the State of New York. There, in 1829, the charters of most of the incorporated banks were to expire within the following three years. These institutions made a combined effort to obtain from the state legislature a renewal of their charters without any conditions or restrictions. In order to effect their purpose, the banks exerted themselves to secure the election of friendly legislators and gained further influence by favoring such schemes for internal improvements as were popular in different localities.

After a bitter fight, the Assembly passed the Safety-Fund Act of 1829, which provided for the establishment of a common fund by requiring every banking corporation to contribute annually a sum equal to $\frac{1}{2}$ of 1 per cent of its paid-in capital stock, until such payments equalled 3 per cent of its capital stock. Whenever the fund was reduced by payments on account of insolvency, the banks were required to continue their annual contributions until the limit of 3 per cent of the aggregate capital of all the banks was reached.

In the first ten years of its operation, the law worked satisfactorily. Creditors of three banks which failed in 1837 were adequately compensated. In the following years, however, many more banks failed so that the fund was entirely inadequate to meet the strain. The fund, at that time, amounted to \$900,000, two-thirds of which was available for the redemption of notes of insolvent banks; the remaining \$300,000 was reserved for depositors. With these new bank failures, the state was forced to contribute \$900,000 which was raised through the flotation of a bond issue, the state accepting a lien on the future payments into the safety fund.

While the idea of a safety fund was sound in principle, it had two serious weaknesses. Firstly, the act applied to all creditors of the banks instead of to noteholders only. Assessments were inadequate to meet the deposit liabilities in addition to the note liabilities of insolvent banks. In 1842, however, the act was amended to provide that the funds should be used solely for the redemption of bank notes; deposits and other liabilities were to be considered charges against available assets of an insolvent institution. Secondly, contributions to the fund were based on the capital stock instead of on the amount of notes in circulation.

In 1846, New York changed its constitution to eliminate the chartering of banks or the granting of charter renewals by special acts of the state legislature. Since all banks which adhered to the safety-fund system had been chartered by special acts, the system ceased to be in effect after 1866, at which time the last charter of the "insured" banks expired. In the interval, many of the institutions chartered under the Act of 1829 had disappeared.

The free banking system. — The attempt to establish a free banking system was made in order to protect those applying for a bank charter from exploitation by greedy politicians. As long as state legislatures granted special charters, bribes were solicited

or offered. Such payments were often looked upon as the legitimate spoils of office belonging to the party victorious at the polls. To remedy such conditions, the State of New York passed a general banking law in 1838. Under this law, associations could be formed to engage in a banking business and to issue notes provided a corresponding amount, calculated upon their par value, of securities of the State of New York or of any other state or of the United States had been deposited with the Comptroller of the State. The banks received the annual interest on their securities so long as they redeemed their notes at their own counters. If a bank refused to redeem its notes, the Comptroller warned its directors, and if it continued in its refusal for ten days after such warning, its securities were sold and the notes redeemed from the proceeds by the Comptroller. The state was in no way responsible for the notes.

The New York Free Banking Act as well as the Michigan Free Banking Law, passed one year earlier, established the first American bond-secured system of note issue with ultimate redemption provided by collateral deposited in the custody of the government. The New York law suffered, however, from grave defects. Since the securities of states other than New York were eligible for deposit with the Comptroller, collateral was submitted which had been obtained at a discount and was not selling as high as par value even at the time of application for bank notes.

In 1840 the securities of other states were declared ineligible as collateral for bank notes. Nevertheless, the damage had been done and the mortality of the free banks was so great that less than one hundred banks remained in operation in the state by 1844. Another mistaken notion was then current, namely, that if notes were secured by collateral, redemption would not be demanded or could be easily met. The inevitable test occurred and this unwarranted assumption was disproven. In 1846, the New York state constitution was amended in order to improve banking conditions. Amendments provided that (1) bank stock should carry double liability; (2) in case of insolvency, noteholders should be considered preferred creditors; (3) the legislature should not pass laws sanctioning suspension of specie payments; (4) the granting of special bank charters should be discontinued; and (5) once a corporation charter had been given, it might be altered or repealed.

The free banking system was adopted, in whole or in part, by

seventeen states besides New York. Many of them repeated New York's mistakes of requiring no central redemption and permitting poor qualities of securities to be deposited as collateral for notes. The downfall of the free banking system was disastrous in Illinois, Indiana, and Wisconsin. The outbreak of the Civil War in 1861 closed this phase of American banking after it had made its one notable contribution to the development of a more uniform and a safer note issue, namely, the idea of a currency secured by government securities, an idea which was to be later utilized in the national banking system.

The Louisiana Bank Act of 1842. — The Louisiana Bank Act of 1842 has often been referred to as the most scientific banking legislation passed prior to the National Bank Act of 1863. It was the first law to prescribe a fixed reserve of 33 per cent in lawful money against all liabilities; the remaining two-thirds of liabilities were to be represented by commercial paper with a maturity of not more than ninety days. Stringent restrictions were placed upon the extension of renewals for such commercial loans; provisions for supervision were likewise very rigorous.

THE NATIONAL BANKING SYSTEM

Arguments in favor of a national banking system. — At the beginning of the Civil War, there existed in the United States approximately sixteen hundred state banks, with a total capital of \$420,000,000 and a note circulation of \$184,000,000, which notes were listed at varying discounts in the *Bank Note Detector*. These banking institutions operated under the laws of twenty-nine states. As to organization, there were banks with branches and independent banks, as well as free banks and institutions organized under special charters. Bank examinations ranged from those given by efficient boards of bank commissioners to examinations made as a mere formality in compliance with the letter of the law. About 7,000 different types of notes were circulated; in addition, more than 5,000 different types of fraudulent notes were in existence, including altered and spurious notes. Since most people were in no position to recognize or refuse questionable notes, the loss entailed by such an unbearable situation fell primarily upon the general public. Probably the strongest argument in favor of a national uniform banking system was this *lack of uniformity in the note circulation*.

Another defect was *the unequal distribution of bank notes*, a result of an inadequate banking structure. In New England, the circulation was approximately \$50,000,000. In Ohio, where the population was three-fourths as large, circulation amounted to \$9,000,000. Such sectional inequality was very much stressed by business interests suffering under it.

Perhaps one of the most irritating aspects of state banking was its *alternating contraction and expansion of the currency*, irrespective of the needs of business. For example, in 1841, circulation amounted to \$107,000,000; at the end of 1842, to only \$59,000,000. In 1857, it reached its highest point prior to the Civil War when it stood at \$215,000,000; by the first of January 1858, it had been reduced to \$155,000,000.

The National Banking Act of 1863. — After considerable opposition on the part of state banks which feared the loss on sales of their state bonds if a national banking system were to be established, "an Act to provide a National Currency, secured by the pledge of United States stocks [bonds], and provide for the circulation and redemption thereof" was finally approved on February 25, 1863. The new banking system provided that a national bank, after depositing bonds with the Treasurer of the federal government, could receive its own bank notes up to the amount of 90 per cent of the current market value of the bonds deposited. Originally, the total national bank note issue was limited to \$300,000,000, to be apportioned to the banks in the various states in accordance with their population, banking conditions, and need. The notes were not full legal tender; they were receivable for all government dues except customs duties and payable by the government except for the repayment of principal or payment of interest on its indebtedness. Each issuing bank was required under the law to redeem its notes over its own counter. A bureau of currency in the Treasury Department was to act as supervisory agency for the system. State banks could transfer to the national system and an arrangement was made for the issuance of notes by state banks.

The system under the Act of 1863 developed slowly.⁴ Bank organization went ahead more rapidly in Ohio, Indiana, and Illinois,

⁴ For an account of the unwillingness of the state banks to become national banks see: Conant, Charles A., *A History of Modern Banks of Issue*, pp. 409-411. New York: G. P. Putnam's Sons, 1927.

owing to their greater need for bank-note circulation. On October 1, 1863, sixty-six banks had deposited less than \$4,000,000 of United States bonds; one year later, the circulation of five hundred eighty-four issuing banks had reached only \$65,000,000. Because of the unsatisfactory and ambiguous provisions of the act, it was repealed in its entirety in 1864.

The Act of June 3, 1864. — This revised act, similar to the Act of 1863, provided for a system of free banking, supervised by the Comptroller of the Currency in Washington. Five or more individuals could establish a banking institution by complying with the organizational formalities and capital requirements. Charters granted were for a twenty-year period.

✓ *Capital requirements.* — The minimum capital required was \$50,000 in towns under 6,000 population; in cities of more than 6,000 and less than 50,000, \$100,000; and in cities of more than 50,000 population, at least \$200,000. Ever since the passage of this act, the principle of fixing minimum capital requirements for banks according to population has been followed. Fifty per cent of the capital subscribed was to be remitted before the opening of the institution; the balance was to be paid at the rate of 10 per cent per month following the opening. The stock certificates possessed a par value of \$100, and carried double liability, with the exception of the National Bank of Commerce of New York. The surplus account was required to be 20 per cent of the paid-in capital, to be built up out of earnings by setting aside one-tenth of the net profits for this purpose before any dividends could be paid.

The note issue. — Each national bank was to deposit with the Treasury at least \$30,000 in United States bonds, but not less than one-third of its capital. Upon this collateral a bank could issue its own notes, obtained from the Comptroller of the Currency, up to 90 per cent of the par value of such bonds. In 1900, this provision was changed to permit the procurement of notes up to par or market value, whichever was lower. No bank could issue notes in excess of its paid-in capital. Until 1933, the notes were redeemable in lawful money. All national banks were to receive them at par for all public dues. They were not, however, legal tender for private obligations until 1933. Under the Federal Reserve Act of 1913, a national bank was no longer required to buy government bonds unless it intended to issue bank notes. The increasing use of the bank

check, coincident with an increasing urbanization of the population and the existence of notes issued by and through the Federal Reserve banks, greatly curtailed the need for bank notes. The total issue under the act was at the time limited to \$300,000,000. One-half of this amount was to be apportioned among the issuing banks on the basis of population; the other half was to be apportioned by the Secretary of the Treasury with due regard to existing banking capital and business needs.

Reserves. — All cities were divided into three groups as a basis for determining legal reserves: central reserve city banks, reserve city banks, and country banks. New York was the only central reserve city. (Chicago and St. Louis were made central reserve bank cities in 1887.) Sixteen other leading cities were designated as reserve cities. All others were classified as country banks. The legal reserves were to be in lawful money (specie and greenbacks) and were to be kept against both note and deposit liabilities. The reserve for the New York banks was 25 per cent, to be kept in their own vaults. Reserve city banks likewise had to maintain a 25 per cent reserve. In their case, however, only one-half of the reserves was required to be held in the form of cash; the remainder could be deposited in the form of cash deposits with approved banks in New York City. All banks located outside the area of these seventeen designated cities had to keep reserves equal to 15 per cent of their notes and deposits. Two-fifths was to be held in lawful money in their own vaults; the remaining three-fifths could be deposited in the form of cash deposits with approved banks in central reserve or reserve cities.

Should the reserves of any national bank fall below the legal minimum, no further loans or investments or dividend payments were permitted until the deficiency had been corrected. Banks in the seventeen central reserve and reserve cities were required to redeem the notes of any institution for whose account they held reserve deposits. Failure to comply with this regulation would subject them to insolvency proceedings by the Comptroller of the Currency, in the same manner that it would if they had failed to redeem their own notes.

Banking business. — The banks were so organized as to enable them to carry on a general commercial-banking business. But they were not permitted to make loans upon the security of real

estate nor to purchase, hold, or transfer real estate except as was necessary for the conduct of their authorized business. No money could be advanced on the security of a bank's own stock. Moreover, no bank could lend to any one customer more than 10 per cent of its capital stock. This restriction did not apply to the discounting of bills of exchange drawn against actually existing values and to the discounting of commercial paper actually owned by the person offering it to the bank. A tax of $\frac{1}{2}$ of 1 per cent upon the average note circulation and a tax of $\frac{1}{4}$ of 1 per cent upon the average deposits and the average capital not invested in United States bonds was levied.

The relation of the banks to the government. — The Secretary of the Treasury was given authority to use the national banks as depositories of all public money except customs receipts. This service the banks rendered most efficiently. Between 1863 and 1878, despite receipts of public money by the banks of more than \$220,000,000 annually, only \$255,000 stood on the Treasury's books as unavailable on account of bank failures. The Treasury held securities against part of this loss. Upon all balances deposited to the credit of the government, the banks paid an interest rate of $\frac{1}{2}$ of 1 per cent.

The federal government guaranteed the note issues of the national banks. In case of default, the Treasury would pay the notes in full, either canceling a corresponding amount of the forfeited bonds or selling the bonds at auction to recover the money paid to the note-holders. Should the proceeds of the bonds be insufficient to cover the note liability, the government held a first lien on all remaining assets of the bank that failed.

Bank supervision. — Between 1869 and 1922, five reports, as of dates unknown beforehand to the banks, were required annually by the Comptroller of the Currency. Since 1922 only three reports have been required annually, which must be published in newspapers. The Comptroller might call for additional special reports at his discretion. To avoid "window dressing," the calls were and are made as of a past date and reports must be submitted promptly. The banks are also required to make semiannual reports as a basis for the computation of federal taxes. National banks are examined at least twice each calendar year at irregular intervals and without previous notice to the bank.

Subsequent development of the system. — The revised Act of 1864 was much more successful in increasing the number of national banks than was its predecessor. But the progress was slow in view of the fact that state banks were still permitted to issue notes, in many instances, under much more favorable conditions than were national banks. A federal act was passed in 1865 which imposed a tax of 10 per cent on all state bank notes issued after July 1, 1866. Since, at that time, the issuance of notes was looked upon as the chief form of bank credit, it was not realized by the embittered state banks that deposit currency would soon outstrip note issue as the chief function of banking. This act was held to be constitutional, not merely because it was an instrument for suppressing a circulation which came into competition with notes issued by the federal government, but because it was the right of Congress to provide a currency for the whole country, either in coin, treasury notes, or national bank notes.⁵ There was no question concerning the power of the government to emit bills of credit, to make them receivable in payment of debts to itself, and to make this currency uniform in value and description, as well as convenient and useful for circulation. As an instrument to this end, the court upheld the power of Congress to tax other issues.

To induce the conversion of state banks into national banks, the National Bank Act was amended to permit state banks with branches to join the national system. No provision was made for branch banking by new institutions organized under it. From 508, in 1864, the number of national banks increased to 1,513, in 1865; and to 1,644 one year later.

An act of Congress passed in 1870 raised the limit of notes to be apportioned to \$354,000,000 and provided for a new apportionment on the basis of the 1870 census. Four years later, voluntary retirement of their circulation by banks was authorized. In the same year, all reserve requirements against notes were abolished; in their place a redemption fund at the Treasury in lawful money was set up equal to 5 per cent of a bank's note circulation. The reserve requirements against deposits were continued, the redemption fund to count as part of the legal reserve against deposits. Redemption of notes was possible either at the issuing bank or at

⁵ *Veazie Bank v. Fenno*. 8 Wall. 533, 19 L. Ed. 482.

the Treasury. In 1875, the limit on the total issue and apportionment procedure was repealed and the banks were permitted to issue notes up to the limit of their paid-in capital.

The Act of March 14, 1900, provided for the redemption and refunding of certain government bonds on a 2 per cent basis. The new "2 per cents" carried the note-issue privilege and the tax on such secured notes was placed at $\frac{1}{4}$ of 1 per cent. If bonds carried a higher interest rate, the old rate of $\frac{1}{2}$ of 1 per cent continued in force. The act likewise permitted the establishment of national banks with a minimum capital of \$25,000 in places with less than 3,000 inhabitants.

Growth of national banks. — From 1,644 national banks, in 1866, with resources of about \$1,500,000,000, the number grew to 3,942 in 1900 with \$5,400,000,000 of resources. By 1914, there were 7,525 national banks with total resources of \$11,500,000,000. The business of the national banks during this period, because of existing legal restrictions, remained predominantly commercial in nature. Two provisions hindered the development of savings departments. On the one hand, as no distinction had been made between time and demand deposits in the National Bank Act, reserve requirements against time deposits were prohibitively high, and the states either specified no reserve or a lower percentage for time deposits than for demand deposits. On the other hand, national banks were prohibited from engaging in real estate loans, the most profitable outlet for time deposits. In addition, national banks could not perform fiduciary functions for their customers prior to the enactment of the Federal Reserve Act. Some of them, however, organized separate trust companies which were chartered by the states.

The development of state banks. — These afore-mentioned restrictions greatly encouraged activities of state-chartered banks and trust companies. While the 10 per cent tax on the note circulation of state banks acted temporarily as a check on their number, the rapid decline in the importance of bank notes as circulating media was followed soon afterward by an increase in the number of state banks. By 1887, state banks were more numerous than national banks; by 1914, they amounted to 19,240 as compared with 7,525 national institutions.

Besides the afore-mentioned restrictions upon national banking,

there were other factors operating in favor of state-chartered institutions. State regulations, on the whole, were much more liberal with regard to loans, reserves, and trust services; moreover, the volume of capital stock could be as low as \$5,000.

One might say that up to 1913 a rather distinct division of function existed between state and national banks. The state and trust banks performed fiduciary functions and provided savings facilities; the national banks, commercial functions. Since 1913, this distinction has tended to disappear.

The defects of the national banking system. — The experiences of the country in the crises of 1873, 1893, and especially 1907, made the defects and weaknesses of the national banking system more and more obvious. The trouble arose particularly from three sources: (1) the collection of out-of-town checks (which will be explained later); (2) the unsatisfactory organization of reserves; and (3) the inelasticity of the note issue.

Weaknesses of regulation of bank reserves. — The system of redepositing reserves, previously described, led to a considerable concentration of deposits with reserve agents, particularly in a few large New York banks. The fault was, however, not with such concentration; concentration of reserves *per se* is desirable, for it provides a reservoir to be used in periods of emergency. The weakness was that these reserve agents were either unable or unwilling to assume this responsibility for the banking system as a whole.

Competition among the city banks increased interest payments on the reserve deposits to as high as 4 per cent. To enable city banks to show profits, earning assets had to be increased to the limit; thus, no possibility of holding a working reserve existed. The bulk of the balances was lent on call to brokers for the purpose of financing stock-market transactions, usually purely speculative in nature. As long as brokers were able to shift loans when called, from one bank to another, the system worked. In periods of strain, the system broke down. The interior banks tried to recall reserve deposits at once which, in turn, necessitated the calling of brokers' loans by all banks. The result was wholesale forced liquidation of collateral with violent effects upon security values.

On two occasions, in 1893 and 1907, New York city banks suspended cash payments before drawing materially on their reserves. This was primarily due to the fact that the National Bank

Act prohibited a bank with deficient reserves from expanding loans or paying dividends. Furthermore, should a bank remain deficient for thirty days after notice, the Comptroller of the Currency possessed discretionary powers to liquidate the institution. Experience clearly indicated that the threat of liquidation was too severe.

Other defects besides the ones mentioned were: (1) location was not a proper basis for reserve requirements; (2) no distinction was made in the classification of deposits between time and demand deposits and between individual demand deposits and interbank deposits; (3) no centralized control over reserves as a means of credit control existed; and (4), as will be discussed later, the stated reserves were largely fictitious, in view of the custom of crediting checks deposited at the time of deposit.

The inelasticity of the currency. — While the national bank notes were satisfactory from the point of view of parity and security, they lacked the other essential attribute of a note issue, namely, elasticity. Contraction and expansion of note circulation, instead of keeping in step with needs, moved at times in the opposite direction.

The factor which regulated the total amount of notes in circulation was not the needs of business, but the availability and price of the bonds required as security. Once paid out, notes tended to remain in circulation until a reduction in the federal debt forced a contraction or until the price of bonds increased to a level at which banks preferred to realize profits from such an appreciation rather than to continue using them as security for bank notes.

During the summer months, hand-to-hand money is usually at its low point. By December the demand rises to a peak, then drops sharply in January and February. In spring a new rise in the demand occurs, but gradually declines with the approach of the dull summer months. The national bank notes showed no such response to payroll activities and the volume of retail trade. No doubt, the time needed for releasing new issues and the restrictions on retirement prevented corresponding action on the part of the note circulation. As a result, autumn was a period of financial stringency with high money rates, owing to the fact that bank reserves of lawful money were drawn into circulation so that reserve ratios approached or fell below the legal minimum.

Note issue was likewise out of step with the cyclical swing. The period from 1885 to 1892 showed an increase in check clearing from

\$38,000,000,000 to \$61,000,000,000. At the same time, the bank-note issue declined from \$315,000,000 to \$172,000,000 in this period of rapid recovery from the depression period of 1884 to 1885. The essential cause of this diminishing circulation was the growing wealth of the country and the mounting tax revenues of the government. Large bond purchases by the government in advance of maturity, made mandatory by tremendous surpluses accumulating in the Treasury, forced bond prices to such heights as to induce banks to retire their note circulation and sell their bonds. It is sometimes asserted that the real explanation of the fall in the volume of national bank notes was the issuance of silver certificates under the silver-purchase acts of 1878 and 1890. While the effect of the increase of silver circulation was a contributory factor in the decline, it is nevertheless true that the major factor was the rise in the price of bonds. Moreover, the primary effect of silver circulation was an expulsion of gold, rather than bank notes, from circulation.⁶

During the depression period 1893 to 1894, national bank-note circulation expanded to \$209,000,000 in the face of business stagnation. This was to be expected as bond prices dropped, Treasury bond purchases ceased, and new bonds were floated to finance the Treasury's deficit. The lower the bond price, the higher were the profits obtained in using them as collateral for additional bank notes. If, for example, a \$1,000 bond bearing 4 per cent interest were bought for \$950 in the market, the yield on the investment accruing to the bank would be higher than would have been the case if the bank had paid \$1,000 for it. Moreover, circulating notes in an amount equal to the par value of the bond could be obtained from the Comptroller of the Currency.

Other defects. — The National Bank Act prohibited national banks from accepting drafts drawn on them by either foreign or domestic institutions. For this reason, New York could not develop into an international financial center prior to 1914. This lack of experience as an international monetary market was largely the cause of the poor record made by New York financial institutions when, as a result of the World War, financial leadership temporarily centered in New York City. Moreover, the lack of prime

⁶ Conant, Charles A., *op. cit.*, pp. 420-421.

commercial paper intensified the demand for brokers' loans as secondary reserves against the reserve deposits of reserve city or country banks.

Despite the authorization to deposit public funds with the national banks, the Independent Treasury System (set up in 1846 as six subtreasuries in various cities to prevent the government's funds from being frozen or lost in insolvent state banks) continued to hold the bulk of the government's funds. As a result there were alternate withdrawals from and deposits with national banks and alternate periods of tight and easy money, irrespective of need.

The dual-charter system of state and national banks fostered a dangerous competition in making concessions in banking law and its administration. The prohibition of branch banking for national banks may also be considered a weakness of the national banking system. The lack of a central bank that could exercise a measure of control over the domestic situation and international capital transfers and coordinate Treasury operations with the temporary conditions in existence on the money market was another outstanding defect of the system.

The panic of 1907 gave great impetus to the discussion of currency and credit problems and as a result many bills were presented in Congress. The outgrowth of this was the Federal Reserve Act of 1913.

Summary. — With the elimination of the various commodity monies through the introduction of stamped metallic pieces there came a necessity for a new service, namely, the exchange of a variegated mixture of foreign coins for domestic coins, and vice versa. The counting of coins and their bodily delivery in every transaction, however, was a dangerous and cumbersome procedure, and hence costly. The transfer of deposit slips left the specie safely in the hands of the banker, incidentally enabling him to make loans. As the division of labor increased with the development of the modern exchange economy, the original banking functions, protection and money exchange, occupied a position of decreasing importance. A rapidly expanding society demanded a new service of banks, namely, that the banks supply larger and larger amounts of currency in the form of bank notes. Almost the entire banking history of the United States during the nineteenth century must be interpreted from this point of view. The National Bank Act was "an

Act to provide a National Currency." The fact that the government saw in the National Bank Act an effective way of assuring a successful bond flotation, essential to the prosecution of the Civil War, does not in any way invalidate this argument. Business needed a convenient medium of exchange in an ever-increasing volume, the supplying of which was looked upon as the banks' function. Many examples can be cited as to how the temporary breakdown of banking facilities retarded the development of business in a particular region or in the entire country. An increasing economic and social integration brought about a decline in the importance of the bank note and an increase in the use of the bank check. This development, in turn, created for banks an entirely different function — deposit banking with its concomitant problems.

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CHAPTER VII

THE FEDERAL RESERVE SYSTEM

The Aldrich-Vreeland Act of 1908. — In an attempt to remedy the conditions brought about by the financial panic of 1907, a number of bills were introduced in Congress which treated of such problems as the legalization of bank notes issued by clearing-house associations, central banking, and emergency circulation of notes. The result of this congeries of bills was the Aldrich-Vreeland Act of 1908. Under it, ten or more national banks were permitted to form a "national currency association," provided each cooperating bank could show an unimpaired capital and a surplus of not less than 20 per cent of capital stock. Only one such association could be established in a city. A board of directors composed of one representative from each constituent national bank was to be the managing agency. The association was to receive securities from its members in the form of approved bonds or commercial paper as collateral for such emergency currency issues.

The members of an association were to be jointly and severally liable to the federal government for the redemption of any emergency notes put into circulation; the government, moreover, was to take a lien on the securities deposited and the total assets of the member banks. To forestall the use of these notes in other than emergency times and to compel contraction of the issue as soon as practicable after the passage of a crisis, a tax was to be levied at the rate of 5 per cent per annum for the first month and 1 per cent for each additional month until the tax amounted to 10 per cent for the first year; after this, a flat rate of 10 per cent was to be levied.

This plan for the establishment of national currency associations to provide for an expansion of the note issue during financial emergencies was never considered an adequate solution of the nation's banking ills. The act was to expire on June 30, 1914, but it was extended for one year by the Federal Reserve Act of December 23, 1913, in order to take care of any financial difficulties which might

arise before the new Federal Reserve System could swing into action. Without this extension, difficulties would certainly have arisen in view of the increase in the demand for money arising from conditions engendered by the World War. The total amount of notes issued during the emergency of 1914 and 1915 was approximately \$400,000,000. During this period, 2,197 national banks organized 45 national currency associations. Almost \$3,000,000 in taxes were collected on this emergency issue.

One of the provisions of the Aldrich-Vreeland Act authorized Congress to appoint a monetary commission to study and report further legislation. After three years of extensive work, the commission through its able chairman, Senator Aldrich, submitted a plan to Congress.

The Aldrich Plan. — The Aldrich Plan visualized a reserve association for the United States, to be situated in Washington, with one branch in each of fifteen districts into which the country was to be divided. The plan was given the name "Reserve Association of America" to avoid the criticism which might arise to the establishment of a central bank in the United States. The Association was to be made up of subscribing national banks, state banks, and trust companies. Control was to be exercised by a board of directors, some of whom would be chosen by the fifteen branch districts, some would serve *ex officio*, and some would be appointed by the President. The branch districts were to consist of local associations of not less than ten institutions in one particular locality. The capital was to be \$300,000,000.

The main powers of the Reserve Association were to be: to rediscount paper for the members; to accept deposits without interest from the members and the United States government; to buy and sell gold coin and bullion; to serve as a national clearing house for the settlement of interdistrict balances; to buy and sell the securities of the federal government; to issue notes, payable upon demand in gold up to \$900,000,000 against a security of part gold and part commercial paper;¹ to establish branches in localities in which the head offices of local banking associations were located; to engage in the buying and selling of foreign paper; and to provide for a uniform rate of discount throughout the entire country.

¹ Both reserve requirements and limits of maximum issue might be suspended temporarily upon payment of an emergency tax.

Additional power was to be given to the national banks in order to enable them to accept prime bills, perform fiduciary services for their customers, and extend real estate loans. On the other hand, the power of the national banks to issue notes was to be curtailed with the aim of gradually eliminating all national bank notes and substituting for them the notes of the new National Reserve Association.

This bill was never reported out of the Banking and Currency Committees in either branch of Congress. In its platform the Democratic Party declared its opposition to it. The Progressive Party, under the leadership of Theodore Roosevelt, fought the proposal for its lack of effective public control. The Republican Party in its monetary reform plank refused to indorse the Aldrich Plan. Seemingly, the electorate was led to believe that the Aldrich Bill was designed to establish a central bank in the European sense of the term.

Toward the end of 1912, work was begun on a new plan to provide for a system of regional banks, with the Comptroller of the Currency as the connecting link between the various regional banks. Hearings were held the following year. President-elect Wilson disapproved supervision by the Comptroller of the Currency and recommended a separate central board which would coordinate the operations of the entire system.

Many of the leading bankers of the day, especially those from New York and Chicago, engaged in active opposition to the act which was known as the Glass-Owen Bill. Their opposition was directed in part against the provision which would establish as many as twelve regional banks and in part against the provision that the members of the proposed Federal Reserve Board should be appointed by the President with the advice and consent of the Senate. Members of the American Bankers Association in their annual convention in 1913 voiced opposition to the same legislation. Despite attacks from these and other sources, the congressional leaders who were sympathetic with the policies of President Wilson kept party lines intact and defeated attempts to change the bill in its main outlines.

The conference committee's report on the bill, after being subjected to five drafts, passed Congress on December 23, 1913, and was signed by the President on the same day. The difference

between Sen. Glass' and Sen. Aldrich's bills was primarily one of control. The latter would have established control by one central body, the nation's banks possessing the preponderant voice in the appointments to the board, with the government as the voice of the minority. The Federal Reserve Act provided for a division of control between the reserve banks which represented primarily the member banks, and the Reserve Board which represented the government.

THE STRUCTURE OF THE FEDERAL RESERVE SYSTEM

The Federal Reserve banks. — As provided by the new Federal Reserve Act, an organizing committee consisting of the Secretaries of the Treasury and Agriculture and the Comptroller of the Currency was to designate not less than eight and not more than twelve cities as Federal Reserve cities and to divide the country into a corresponding number of districts, each to contain one Federal Reserve city. Each district was to be known as a Federal Reserve district. In each reserve city a Federal Reserve bank was to be established to serve as the central bank for its district.

Capital and membership requirements. — All national banks within the continental United States were required to become members of the Federal Reserve System. Eligible banks and trust companies operating under a state charter were permitted to join the System after complying with the reserve and capital requirements of national banks. Each prospective member bank was to subscribe to stock in its district reserve bank to the amount of 6 per cent of its own paid-in capital and surplus. Only one-half of the par value of the stock was to be paid at the time a bank became a member of the Federal Reserve System; the other half was to remain subject to call by the Federal Reserve Board. The amount of stock held by member banks was to be increased or decreased as increases or decreases in the amount of their capital and surplus occurred. The shares themselves were nontransferable.

Upon the amount paid in, the Reserve banks were to pay cumulative dividends at the rate of 6 per cent per annum. As amended in 1919, the Federal Reserve Act provided for the creation of a surplus equal to 100 per cent of the capital stock and, thereafter, the allocation to surplus of one-tenth of the net earnings over and above the dividend paid. In 1933, Congress required the Reserve

banks to pay out of their surplus approximately \$139,000,000 to the newly organized Federal Deposit Insurance Corporation. To enable the banks to restore their surplus, which had been depleted by about one-half as a result of this payment, the former franchise tax was abolished. On December 31, 1939, the Federal Reserve banks showed a surplus of \$176,000,000 and a capital of \$135,000,000.

In acting upon the application of state institutions for membership, consideration is given by the Board of Governors of the Federal Reserve System to the following points: (1) the financial history and condition of the applying bank and the general character of its management, (2) the adequacy of its capital structure and its future earnings prospects, (3) the convenience and needs of the community being served by the bank, and (4) the consistency of the applying bank's corporate powers with the purposes of the Federal Reserve Act.

Any state member bank or trust company may withdraw from membership after having given a written notice to the Board of Governors six months prior to such action. This six months' notice may be waived in individual cases by the Board. The withdrawing bank's stock in its district reserve bank will be canceled upon surrender. No Federal Reserve bank may, however, cancel within the same year more than 25 per cent of its capital, on account of such voluntary withdrawals.

Management of the Federal Reserve banks. — Each Federal Reserve bank has a board of nine directors who must be residents of the district. The term of office of all directors is three years, timed in such a manner as to permit the expiration of the term of three directors each year, one of each of the three classes of directors. Six of the nine directors are elected by the member banks of the respective district: three Class A directors, representing the member banks of the district, and three Class B directors, representing the district's commerce, agriculture, or industry. For the election of the directors, in order to assure democratic management of the reserve bank, member banks are divided into three groups according to size of capital and surplus — small banks, medium-sized banks, and large banks. Each group of member banks elects one Class A director and one Class B director. The remaining three directors, termed Class C directors, are appointed by the Board

of Governors of the Federal Reserve System and may not be either officers, directors, employees, or stockholders of any bank. One of the Class C directors is designated by the Board of Governors of the Federal Reserve System as chairman of the board of directors and Federal Reserve agent, and another as deputy chairman. The Federal Reserve agent is the official representative of the Board of Governors and is required to maintain a local office for that

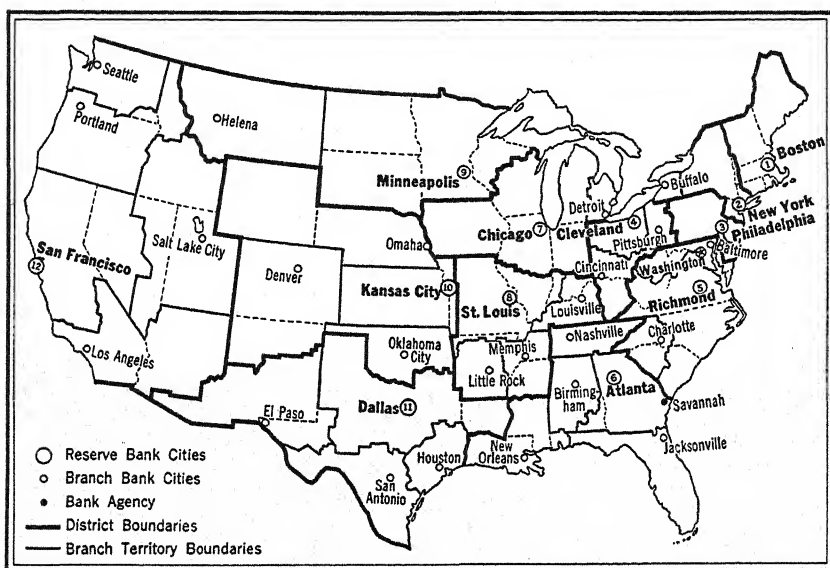


FIG. 16. FEDERAL RESERVE DISTRICTS

body on the premises of the Federal Reserve bank. He administers whatever banking laws are delegated to him and keeps himself informed of the condition of all member banks, and issues periodical reviews of banking and business conditions in the district.

The membership of a Reserve bank board of directors then is made up of Class A directors representing the lenders of funds, Class B directors representing the borrowers of these funds, and Class C directors representing the interest of the general public. Since March 1, 1936, the chief executive officer of a Federal Reserve bank has been the president who, together with the first vice-president, is appointed for a term of five years by the board of directors with the approval of the Board of Governors of the Federal

Reserve System. Other officers may be appointed by the board of directors of each Federal Reserve bank.

Under the 1913 Act, each of the twelve Federal Reserve banks is authorized, if it is deemed necessary, to establish branches. Their management is to be vested in a board of five or seven directors, of whom a majority is appointed by the board of directors of the parent Federal Reserve bank and the remainder by the Board of Governors of the Federal Reserve System. In 1927, permission was given to the Federal Reserve banks to close any of their branches at any time should conditions warrant such procedure. Today there are twelve Federal Reserve districts, in each of which there is one Federal Reserve bank bearing the name of the city of its location. There are also in operation twenty-four branches of Federal Reserve banks and one agency.

The Board of Governors of the Federal Reserve System. —

Under the Act of 1913, a Federal Reserve Board was established to provide a supervisory and coordinating agency for the conduct of affairs and management of the twelve banks under its jurisdiction. This board was to consist of the Secretary of the Treasury and the Comptroller of the Currency, both of whom were to be members *ex officio*, and six additional members appointed by the President of the United States, with the advice and consent of the Senate. In his selection of members of the board, not more than one of whom was to be chosen from one Federal Reserve district, the President was to exercise due regard to a fair representation on the board of the nation's financial, agricultural, and industrial and commercial interests. The Secretary of the Treasury was to act as chairman of the Board during his term of office.

The Banking Act of 1935 changed the name of the Federal Reserve Board to the Board of Governors of the Federal Reserve System. The new board consists of seven appointive members serving for terms of fourteen years at a salary of \$15,000 per year. No member is permitted to serve more than one full term. Of the seven members of the Board of Governors, the President designates one as chairman and one as vice-chairman. The 1935 act does not stipulate, as is the case with some other federal agencies, that it is to be a bi-partisan board, nor does it make any provision for the qualification of prospective appointees.

The Federal Open-Market Committee. — In 1922, an open-

market investment committee, consisting of the governors of four (and later five) of the Federal Reserve banks, was established for the purpose of achieving unification in the open market sales and purchases of all Federal Reserve banks. In 1930, this committee was abolished and the practice of holding open-market policy conferences was adopted. The Banking Act of 1933 legalized the conference by creating the Federal Open-Market Committee. Since March 1, 1936, this committee has been composed of the seven members of the Board of Governors of the Federal Reserve System and five representatives of the Federal Reserve banks who are elected annually.

The Federal Advisory Council. — The Federal Advisory Council is composed of twelve members, one from each Federal Reserve district, selected annually by the board of directors of the Federal Reserve bank of the district. The council is required to meet in Washington at least four times each year, or oftener if called by the Board of Governors of the Federal Reserve System, and may hold such other meetings in Washington or elsewhere as the Council may deem necessary. The council acts purely in an advisory capacity, conferring directly with the Board of Governors on general business and financial conditions and making recommendations concerning matters within the board's jurisdiction and the general affairs of the Federal Reserve System.

Summary. — Summing up our discussion of the structure of the Federal Reserve System, the component parts of the system are as follows: (1) the Board of Governors (seven members) of the Federal Reserve System, (2) the Federal Open-Market Committee, (3) the twelve Federal Reserve banks with twenty-four branches and one agency, (4) on June 29, 1940, the member banks numbering 6,398 — 5,164 national banks and 1,234 state banks, and (5) the Federal Advisory Council.

POWERS AND FUNCTIONS OF THE FEDERAL RESERVE AUTHORITIES

Powers and functions of the Federal Reserve banks. — The principal functions of the Reserve authorities fall into two categories: those relating to the maintenance of adequate monetary and credit conditions, which call for policy decisions rather than

routine administration, and those relating to the performance of regular services for the member banks of the Federal Reserve System, the United States Government, and the general public.

I. *Service functions*

- A. Holding the basic reserves of the banking system.
- B. Providing for the currency needs of the country and issuing bank notes.
- C. Clearing and collecting checks for member banks.
- D. Supervising member banks.
- E. Acting as fiscal agents, custodians, and depositories for the government.

II. *Functions involving policy decisions*

- A. Making discounts for or advances to member banks.
- B. Purchasing and selling securities in the open market.
- C. Extending direct loans to business and industry under certain conditions.
- D. Fixing reserve requirements.
- E. Establishing discount rates.
- F. Issuing regulations pertaining to these and other functions.

SERVICE FUNCTIONS

Member bank reserves. — Every member bank is required by law to keep on deposit with the Federal Reserve bank of its district a sum bearing a specified relation to its demand and time deposits. Under the Federal Reserve Act of 1913, the classification of banks into central reserve city, reserve city, and country banks, as it was contained in the National Banking Act, was retained. The required reserves, however, were reduced from 25, 25, and 15 per cent of all individual deposits to 18, 15, and 12 per cent against demand deposits. The distinction between time and demand deposits was made, a 5 per cent minimum reserve being required by law against time deposits of all three classes of banks.

These legal reserves were to be held in part on deposit with the Federal Reserve banks and in part in cash in the member banks' own vaults. A time limit of three years was permitted to effect the transfer of reserves from the other depository banks to the Federal Reserve banks. Before this period had elapsed, the United States entered the World War. In order to provide for the concen-

tration of gold in the hands of the Federal Reserve System, reserve requirements had to be altered. By an act of Congress passed on June 21, 1917, the legal reserves to be held against both time and demand deposits were reduced and the entire legal reserves were required to be kept in the form of deposits with the Federal Reserve banks. From then on, cash in the vaults of the member banks considered necessary to carry on business has to be maintained in addition to the legal reserves in the Federal Reserve banks. As a result of this compulsory increase in nonearning assets, the criticism has been occasionally advanced that cash in the vault should count as part of the requirements for legal reserve, otherwise, it is believed, banks removed from the domicile of a Federal Reserve bank are discriminated against in that they are required to keep larger cash amounts on hand than a bank that is located nearer a Federal Reserve bank.

TABLE 1. MEMBER-BANK RESERVES UNDER THE FEDERAL RESERVE ACT, AS AMENDED IN 1917

Class of bank	Per cent of deposits required to be maintained	
	Against demand deposits	Against time deposits
Central reserve city.....	13	3
Reserve city.....	10	3
Country.....	7	3

In 1933 and again in 1935, the section of the Federal Reserve Act dealing with "Bank Reserves" (Section 19) was amended to read as follows:

Notwithstanding the other provisions of this section, the Board of Governors of the Federal Reserve System upon the affirmative vote of not less than four of its members, in order to prevent injurious credit expansion or contraction, may by regulation change the requirements as to reserves to be maintained against demand or time deposits or both by member banks in reserve and central reserve cities or by all member banks; but the amount of the reserves required to be maintained by any such member bank as a result of any such change shall not be less than the amount of the reserves required by law to be maintained by such bank on the date of enactment of the Banking Act of 1935 nor more than twice such amount.

In view of the acceleration in economic activity and greatly increased gold imports into the country during 1936 and 1937,

resulting in the accumulation of \$3,000,000,000 of excess reserves held by member banks, the Board of Governors, in compliance with the afore-mentioned section, decided to increase reserve requirements as shown in the following table:

TABLE 2. MEMBER-BANK RESERVE REQUIREMENTS

(Per cent of deposits)

<i>Classes of banks and deposits</i>	<i>6/21/1917- 8/15/1936</i>	<i>8/16/1936- 2/28/1937</i>	<i>3/1/1937- 4/30/1937</i>	<i>5/1/1937- 4/15/1938</i>	<i>4/16/1938 and after</i>
<i>On net demand deposits:</i>					
Central reserve city . .	13	19½	22¾	26	22¾
Reserve city	10	15	17½	20	17½
Country	7	10½	12¼	14	12
<i>On time deposits:</i>					
All member banks . .	3	4½	5¼	6	5

In April 1938, in order to retard the downward spiral of the business recession, the President asked the Board of Governors of the Federal Reserve System to reduce bank-reserve requirements, on the assumption that business under the psychological stimulus of easily accessible credit would borrow more freely. The requirements, at that time, were lowered by about 12½ per cent, bringing reserve requirements near the levels existing prior to the increase on May 1, 1937.

No interest is paid by the Reserve banks on member-bank reserve deposits. If they did pay interest, Federal Reserve banks would need to be so operated as to earn the interest and would have to keep their funds more fully invested. Since the operations of the Federal Reserve banks must be conducted with reference to general credit and business conditions rather than to the need for profit, the Reserve banks cannot afford, and are not permitted, to pay interest on deposits.

Reserves against deposit liabilities of Federal Reserve banks. — The reserve accounts of the member banks constitute deposit liabilities of the Federal Reserve banks against which the Reserve banks must keep 35 per cent in gold certificates or lawful money. Under the Federal Reserve Act as amended the Federal Reserve authorities are authorized to suspend for limited periods these reserve requirements, as stated in the law.

Currency requirements. — The Federal Reserve banks are the main currency reservoirs of the United States. Member banks obtain from the Federal Reserve bank of their district the currency which they pay out. Nonmember banks usually obtain their currency from their correspondent banks, which are members of the Federal Reserve System. They, in turn, order currency from the Federal Reserve banks. Currency transactions between a member bank and a Federal Reserve bank are much the same as those between an ordinary bank and its depositors. When an individual depositor needs currency, he draws a check on his bank and cashes it. In case he lacks a sufficient balance, he may be forced to borrow. Similarly, a member bank in need of currency draws and cashes its check on its Federal Reserve bank. At times, a member bank may find it necessary to borrow at its Federal Reserve bank in order to build up its balance there. Thus, the increase or decrease in the volume of currency in circulation does not depend upon the initiative of the Federal Reserve banks, but upon the needs of member banks, whose needs, in turn, are determined by the needs of their customers. In order to create a special incentive for depositing with the Federal Reserve banks all currency temporarily in excess of need and to provide an incentive for requesting additional currency in case of need, the entire cost of shipping currency to and from member banks is paid by the Federal Reserve banks. The cost of providing Federal Reserve currency, amounting annually to about \$4,000,000, is likewise paid by the Federal Reserve banks.

Federal Reserve notes. — Under the issue procedure set forth in the Federal Reserve Act, Federal Reserve notes are printed by the government and stored in the vaults of the Treasury. They are then transferred to the Federal Reserve banks where they are held by the Federal Reserve agent in trust for the Board of Governors of the Federal Reserve System. In case of need, a Federal Reserve bank applies to its Federal Reserve agent, and upon receiving the required collateral, the agent issues the amount of notes requested.

Federal Reserve notes are in reality bank notes although they are the obligations of the United States as well as of the issuing Reserve bank. An interesting story lies back of that provision of the Federal Reserve Act which makes these notes the obligation of the United States. William Jennings Bryan, a powerful figure in

the Democratic Party in 1913, had long contended that note issue was a prerogative of the federal government. The provision in the Glass-Owen Bill which would make the Federal Reserve notes bank notes displeased him so much that he threatened to use his influence to prevent its passage. President Wilson offered as a compromise that the Federal Reserve notes should be made an obligation of the United States. Despite this compromise, they are in reality bank notes because they are issued by the Federal Reserve banks; they are a first lien on the assets of the issuing bank and the Board of Governors has never exercised its authority to alter or reject the application of any Reserve bank for them.

The framers of the Federal Reserve Act sought to provide a note issue which should possess a high degree of elasticity. It was their belief that such elasticity could be provided by the requirement that member banks should obtain Federal Reserve notes only by presenting short-term, self-liquidating paper to the Federal Reserve banks. The Reserve banks would, in turn, present this collateral to the Federal Reserve agents to be held as security for the notes. The plan whereby automatic elasticity was to be achieved was not fully tested before amendments to the Federal Reserve Act were adopted which modified it. Three important changes in the requirements concerning the issuance of notes have been made since the establishment of the Federal Reserve System. These represent a significant change in the theory of Federal Reserve credit.

1. *By the amendment of June 21, 1917*, the gold or gold certificates held by the Federal Reserve agent as collateral against Federal Reserve notes were to be counted as a part of the gold reserve which the Federal Reserve bank was required to maintain against its note liability. The result of this amendment was to facilitate the impounding of gold in the hands of the Federal Reserve agents. Prior to this amendment, the Federal Reserve Act required that 40 per cent gold in addition to 100 per cent commercial paper be deposited with the Federal Reserve agent as collateral against Federal Reserve notes. Thereafter these notes might be covered by a total of 100 per cent commercial paper and gold, so long as there was not less than 40 per cent gold reserves against the volume of them outstanding.

Although there were good reasons for taking this action, it should

be observed that it increased the lending power of the Federal Reserve System and that the volume of notes might continue to increase as gold and gold certificates were deposited with the Federal Reserve agents. The Federal Reserve notes, moreover, could become virtually gold certificates under this procedure, which obviously was not contemplated by the framers of the original Federal Reserve Act. This being the case, they might not vary in volume outstanding with seasonal variations in industry and agriculture.

2. *The Glass-Steagall Act of February 27, 1932*, permitted the Federal Reserve agents to issue Federal Reserve notes on the pledge of direct obligations of the United States. The rapidly declining volume of commercial paper eligible for rediscount at the Federal Reserve banks was largely responsible for this action. The severity of the depression following the stock-market crash of 1929 created widespread apprehension among bank depositors concerning the safety of their funds. Inordinately heavy demands for cash caused member banks to take advantage of the amendment of September 7, 1916, which permitted them to obtain accommodations from the Federal Reserve banks on their own promissory notes secured by United States government securities. Since the Reserve banks could not use this paper to obtain Federal Reserve notes, they were forced to turn gold over to the Federal Reserve agents. In face of the heavy exportation of gold at this time, money in circulation was increasing, thereby reducing the gold holdings of the Federal Reserve banks to dangerous proportions. The effect of the Glass-Steagall Act was to release to the Federal Reserve banks that amount of gold held by the Federal Reserve agents above the 40 per cent minimum against the notes outstanding.

The authority which gave the Federal Reserve agents power to issue Federal Reserve notes directly against government securities was to expire on June 30, 1939, but was extended by an Act of Congress to June 30, 1941. On December 31, 1939, the total of Federal Reserve notes issued to the Federal Reserve banks was \$5,274,522,000, while the collateral held as security for them consisted of only \$1,365,000 of eligible paper. The remainder of the security consisted of gold certificates in the possession of the Federal Reserve banks and due them from the United States Treasury in the amount of \$5,371,000,000.

3. Prior to 1933, the Federal Reserve agents were required to hold gold and gold certificates until they could be exchanged for Federal Reserve notes. When these notes were presented by the Federal Reserve banks for such exchange, they were considered retired and could be reissued only upon compliance with the terms of an original issue. Legislation since that time has made these notes inconvertible and has provided for gold certificates which have no public circulation. These new gold certificates are simply receipts issued by the Treasury for gold received from the Federal Reserve banks. Instead of accepting these certificates, some of the Reserve banks have preferred to carry among their assets the item "gold certificates due from the United States Treasury."

The above-mentioned changes in the requirements for Federal Reserve note issues have profoundly changed their character and have altered the theory of note issue which was entertained by the authors of the original Federal Reserve Act. It is still true, however, that member banks can expand the volume of these notes outstanding by rediscounting and can contract it by using them to pay off indebtedness to the Federal Reserve banks. It should also be observed that the volume of bank deposits and the rapidity of deposit turnover transcends in importance the volume of note circulation in the United States. In other words, bank-note circulation should not be considered a phenomenon apart from the operation of our entire banking system.

Federal Reserve bank notes. — In addition to an elastic note issue, the framers of the Federal Reserve Act visualized a unified currency system. To realize such a plan, the retirement of the national bank notes then in circulation was planned by providing for the temporary issuance of Federal Reserve bank notes which were to take the place of the national bank notes. Under this Act the Board of Governors could require the Federal Reserve banks to purchase at par from the national banks the 2 per cent United States bonds which possessed the circulation privilege, up to \$25,000,000 per year for a twenty-year period. The Reserve banks thereupon had a choice of either issuing Federal Reserve bank notes under the same regulations as formerly applied to the national banks or exchanging such bonds for the United States 3 per cent securities without the circulation privilege.

The plan could not have been fully successful as in the twenty-

year period only \$500,000,000 of the \$725,000,000 of national bank notes could have been retired. Furthermore, the retirement program was interrupted by the World War and was not resumed afterward. Federal Reserve bank notes were, however, issued on two occasions. When, as previously stated, under the Pittman Act of 1918, the Secretary of the Treasury was empowered to melt and sell silver bullion, a corresponding amount of silver certificates had to be retired. In order to provide a substitute currency, the Board of Governors was authorized to require the Federal Reserve banks to issue Federal Reserve bank notes, secured by short-term government obligations deposited with the Treasury. Approximately \$250,000,000 of Federal Reserve bank notes were issued. Under the repurchase clause, silver was to be recoined so that the Federal Reserve bank notes were retired as silver certificates increased.

At the time of the banking crisis of March 1933, Federal Reserve banks were again authorized to deposit with the Secretary of the Treasury United States government securities or commercial paper as collateral for Federal Reserve bank notes. The notes were redeemable in lawful money at the Treasury or at the bank of issue. They were made full legal tender, along with all other forms of hand-to-hand money. As soon as confidence returned, no further need for this type of currency existed. Approximately \$200,000,000 of Federal Reserve bank notes had been issued by the end of 1933. Since that time, the notes have been gradually retired, although under the law the Federal Reserve banks have the authority at present to issue them against an equal amount of collateral in the form of eligible paper or government securities.

The retirement of the national bank notes was finally assured by the action of the Comptroller of the Currency taken on March 2, 1935. On that date, it was announced that since the circulation privilege on United States bonds conferred by the 1932 Act would expire on June 22, 1935, national banks would be asked to substitute either bonds from the remaining classes or lawful money. The remaining bonds, the 2 per cent consols of 1930 and the 2 per cent Panamas of 1916-1936 and 1918-1938, were, however, called later for redemption so that each national bank was forced to deposit, prior to the date of the expiration of the called bonds, enough lawful money with the Treasury to retire its outstanding notes. At the

present, three main types of paper currency are in circulation: Federal Reserve notes, silver certificates, and United States notes. The few remaining Treasury notes of 1890, Federal Reserve bank notes, national bank notes, and gold certificates are being retired as quickly as they return from circulation.

Check collection and clearing. — In the performance of the function of check collection and clearance, the Federal Reserve System is far more efficient than the National Banking System. A description of the procedure now used by the system will be found in Chapter XIII.

Supervision of member banks. — The preamble to the Federal Reserve Act states as one of the purposes of the act the establishment of "a more effective supervision of banking in the United States." To aid in its accomplishment, each Federal Reserve bank maintains a staff for the examination of the member banks of its district. Each Federal Reserve bank, in turn, is periodically examined by the examining staff of the Board of Governors.

Generally speaking, the more important supervisory functions of the Federal Reserve authorities include:

1. The setting of maximum interest rates on time deposits to prevent banks from paying such high rates as to weaken their financial condition.
2. The exercise of disciplinary action against officers and directors of member banks in case of continued unsound banking practice or violation of existing banking laws.
3. The issuance of permits to national banks to offer trust services.
4. The supervision of bank holding companies by granting them permission to vote the stock of member banks controlled by them.
5. The granting of authorization to member banks to organize branches in foreign countries.

Fiscal agency. — Ever since the Act of May 29, 1920, which abolished the subtreasuries and transferred their functions to the Reserve banks, the Federal Reserve banks have been the only wholesale distributors of currency and coin in the United States. The Secretary of the Treasury may deposit any money held in the general fund of the Treasury (except the fund created for the redemption of the Federal Reserve notes) in Federal Reserve

banks, or in member banks. Receipts from such items as income taxes, customs and other internal revenues, post offices, monies derived from the sale of United States securities and deposits of gold or silver certificates make up the bulk of the government's deposits. Treasury checks, payable at any of the Federal Reserve banks, are drawn against these amounts for such purpose as salaries and wages, payments for interest and principal on the public debt, supplies, public works, pensions and relief payments, and others. In the past, the Treasury maintained about 90 per cent of its funds on deposit, retaining a working balance of approximately 10 per cent. However, since 1936 the Treasury has kept less than half of its funds on deposit at the Reserve banks.

Under present conditions the handling of the distribution of government securities and their servicing has become most important to the Treasury. The Reserve banks announce the new issues, receive the subscriptions, and deliver the securities. Under the Banking Act of 1935, Reserve banks are prohibited from buying obligations directly from the Treasury. The government must, therefore, borrow in the open market instead of dumping its securities on the Federal Reserve banks. Moreover, the temptation to postpone or repudiate, partially or wholly, ultimate repayment of government obligations is less pronounced when the securities are held by the public and the private banking institutions of the country. As long, however, as the Federal Reserve System is authorized indirectly to purchase United States securities in the open market with no restriction except observance of reserve requirements, this provision, as expressed by the Banking Act of 1935, is of little value.

In addition to the fiscal services enumerated, many other services are rendered to the government. Transfer of government funds wherever needed may be made for the Treasury. Likewise the safekeeping of securities and collateral in connection with the financial activities of the Reconstruction Finance Corporation, the Home Owners' Loan Corporation, and other federal agencies is a valuable aid to the government. In this connection, one must not forget to mention the Federal Reserve Bank of New York which acts as the Treasury's agent in the foreign-exchange operations of its Exchange Stabilization Fund. Since this bank also receives deposits from foreign central banks, it has played an important role in the execution of gold purchases and transfers. A recent

pamphlet of the Board of Governors of the Federal Reserve System indicates that these fiscal activities in behalf of the government occupy the full time of approximately 2,500 out of the 11,000 employees of the system.

POLICY DECISIONS

Advances to member banks. — Advances to member banks are of two types:

1. *Discounts.* — Federal Reserve banks are authorized to discount for their member banks eligible paper consisting of notes, drafts, bills of exchange, and bankers' acceptances of short maturities arising out of commercial, industrial, and agricultural transactions. These types of short-term paper are discounted by the member banks for their customers; in case of need, they may present these instruments for rediscount at their respective Federal Reserve banks. The period until maturity of eligible business paper may not be in excess of ninety days; agricultural paper, in view of the longer production period, may possess a maturity up to nine months. Instruments representing fixed-capital investments or speculative transactions are not eligible for rediscount.

2. The other type of loans made to member banks is in the form of *advances*. These are made to member banks upon their promissory notes secured by paper eligible for discount or purchase or secured by obligations of the United States government and certain other securities. The former instruments must not exceed a period of ninety days; the latter must not be in excess of fifteen days. Federal Reserve banks are likewise authorized to make advances to member banks upon any assets, whether otherwise eligible or not, which will secure a loan to the satisfaction of the lending Reserve bank. Such loans may possess a maturity of not more than four months and bear interest at a rate of not less than $\frac{1}{2}$ of 1 per cent per annum higher than the highest discount rate at the time in effect at the particular Federal Reserve bank. Under certain conditions, advances may be made to groups of member banks upon collateral other than eligible paper.

During 1937, these provisions were still further liberalized. Today the Board of Governors encourages member banks to have their real estate loans and instalment paper in a form which would render them acceptable as collateral for advances at the Federal

Reserve banks. The revised regulations also eliminate older provisions under which certain paper, the proceeds of which were advanced or loaned by the member banks to other borrowers, was made ineligible for discount at Federal Reserve banks. The elimination of these provisions made eligible for discount a large amount of paper of commission merchants and finance companies, including paper drawn to finance instalment sales of a commercial character.

The rate of interest charged the member banks by the Federal Reserve banks is called the discount rate. The discount rate for each class of paper is required to be established every fourteen days by each Reserve bank, or oftener if it is considered necessary by the Board of Governors of the Federal Reserve System. The rate is subject to review and determination by the Board of Governors and is applied uniformly to all member banks in the district, on paper of similar character, and is usually lower than the rate charged by a member bank to its customers. While member banks' lending rates are determined, subject to state law, largely by custom and business conditions, the discount rate is determined mainly with reference to credit conditions. Discount rates are advanced when there is evidence of excessive growth of credit or the development of speculative activity and reduced when business is inactive and the demand for credit is low.

Federal Reserve banks may borrow from each other by rediscounting assets arising from loans which they have made. This procedure is termed interdistrict rediscounting. In the early years of the postwar period when agriculture suffered from a severe deflation, the mid-western and southern Federal Reserve banks borrowed heavily from those in the eastern districts, in fact, so much so that their reserve ratios would have been far below the 35 per cent legal requirement had it not been that the proceeds of interdistrict rediscounting were available.

Open-market investments. — Section 14 of the Federal Reserve Act gives the Federal Reserve banks authority to sell and purchase in the open market, at home or abroad, cable transfers, bankers' acceptances, bills of exchange, gold coin and bullion, United States government bonds and certain warrants of municipal and other political subdivisions, and certain other securities and acceptances of the Federal Intermediate Credit Banks and the National Agricultural Credit Corporations. These operations were formerly

regarded as a matter of Federal Reserve bank investment policy but experience showed they are an important part of the System's credit expansion or contraction activities. The sale of securities by the Reserve banks will tend to reduce reserve balances of member banks and, thus, will induce the member banks to contract credit in order to replenish reserve balances. The consequence will likely be a rise in money rates, stimulating further contraction. On the other hand, the purchase of securities tends to increase member-bank reserves and, thus, places additional funds into the hands of member banks which will seek to invest them. This, in turn, will cause interest rates to fall and act as a further stimulus for credit expansion. It is, of course, obvious that the operation of the discount rate and open-market commitments are complementary rather than different instruments of control. It would be absurd, under ordinary conditions, to raise the discount rate and purchase huge blocks of securities at the same time.

The Federal Open-Market Committee. — Open-market purchases and sales can only be made in accordance with the direction and regulation of the Federal Open-Market Committee. The entire membership of the Board of Governors of the Federal Reserve System serves on the Federal Open-Market Committee which is composed of twelve persons — the other five members represent the twelve Federal Reserve banks.

Open-market operations differ from rediscounting operations in that they are undertaken upon the initiative of the Federal Reserve System, whereas rediscounts are made upon the initiative of the member banks. As stated, the Board of Governors possesses the right to refuse to rediscount eligible paper. In the past, this right was occasionally exercised because the bank requesting a rediscount was considered to be borrowing too heavily or too steadily. This right may also be exercised, if, in the opinion of the Board, a bank's lending practices are unsatisfactory. Decisions in regard to open-market operations are made with reference to general credit conditions and exert an important influence on the volume of funds available to prospective borrowers in the money market.

Attention has been called to the necessity for having a consistent policy which will apply the power to fix rediscount rates and the use of open-market operations as an instrument of credit control. It is possible, however, that a conflict might arise between the credit

policy of the Board of Governors, having jurisdiction over rediscount rates, and the policy of the Open-Market Committee. Although there has been no instance of an actual conflict of this nature, it is possible to have such a division of opinion within the Board which would result in a majority of the Board favoring one policy and a majority of the Open-Market Committee favoring another. For example, four members of the Board might favor a policy which would retain the present rediscount rates, while the other three members might favor a change. These three members, together with four or five members of the Open-Market Committee, who favor a change, would comprise a majority of the Open-Market Committee.

Industrial loans. — An amendment to the Federal Reserve Act of June 19, 1934, authorizes Federal Reserve banks "in exceptional circumstances, when it appears to the satisfaction of a Federal Reserve bank that an established industrial or commercial business located in its district is unable to obtain requisite financial assistance on a reasonable basis from the usual sources" to "make loans to . . . such business . . . on a reasonable and sound basis, for the purpose of providing it with working capital." But it provides that "no obligations shall be acquired . . . with a maturity exceeding five years." A second type of assistance is given to industry by the Federal Reserve bank when a member or nonmember bank makes a loan, after protecting itself by securing a commitment from its Federal Reserve bank. This commitment binds the particular Federal Reserve bank to take over the loan at the request of the lending bank and to assume the proportion of the loss agreed upon. This loss must not, however, exceed 80 per cent of the amount lent. A third procedure is that the Federal Reserve banks may participate with member banks or other financial institutions in granting loans for working capital purposes to established industrial or commercial businesses.

In view of the fact that business interests, during 1937 and 1938, severely criticized banks for refusing to make loans, the experience of the Federal Reserve Bank of New York with industrial loans is interesting. When applications for such loans from the Second Federal Reserve District are received, they are carefully analyzed by a staff assigned to that purpose, and the facts are presented to a so-called Industrial Advisory Committee (consisting of five businessmen of varied interests who serve without compensa-

tion), who then recommend to the bank approval or disapproval of the applications. The final decisions rest as usual with the Board of Directors of the bank.

From 1934 to May 15, 1940, applications for industrial advances for all Federal Reserve banks amounted to 9,503, with requests totalling \$413,124,000; of these, 2,831 were approved by the Reserve banks in the amount of \$195,351,000.

In many cases the loans made, either directly or in conjunction with commercial banks, have served a useful purpose and permitted the borrowers to maintain or to increase employment, or to rehabilitate their business. The Federal Reserve Bank of New York, in a summary of its experience with such loans, states:

although great care was exercised in the original review of the application, and constant supervision has been maintained, it has been necessary to place a number of the loans on the "trouble" list of this bank, and in a few cases the borrowing concerns have failed despite the receipt of loans. In general, the experience of this bank with this type of loan indicates that the income received, even at rates as high as six per cent, is not adequate to cover expenses and losses.

Federal Reserve banks may also make advances to commercial, industrial, and agricultural interests upon their notes secured by United States government securities for periods not exceeding ninety days. Furthermore, upon authorization of the Board of Governors, the Federal Reserve banks may discount the notes, drafts, and bills of exchange of business firms, if they are the type eligible for rediscount for member banks. Federal Reserve banks may also discount short-term agricultural paper for the Federal Intermediate Credit banks.

Reserve requirements.—The Board of Governors of the Federal Reserve System may, within the afore-mentioned limitations, change the requirements as to the reserves to be maintained by the member banks against deposits, in order to prevent an injurious credit expansion or contraction. The recent exercise of this power has been illustrated earlier.

Changes in the amount of reserve balances maintained by member banks with the Reserve banks are one of the most important indicators of credit conditions. Since member banks must maintain a specified proportion of reserves in relation to their demand and time liabilities, and since in ordinary times banks do not carry a large amount of idle funds, changes in the volume of reserve bal-

ances ordinarily correspond to proportionate changes in deposits held by member banks. When member-bank reserves increase, the banks tend to increase their loans and investment. On the other hand, if reserve balances are diminished, member banks must either liquidate some of their loans and investments or borrow from the Reserve banks in order to bring their reserves up to the legal minimum requirements.

Discount rates. — The discount rates charged by the Federal Reserve banks, established by the boards of directors of these banks, are subject to the review and determination of the Board of Governors. While the discount rate charged the member banks by the Federal Reserve banks is usually lower than the rate charged the customers of the commercial banks, banks do not borrow from their Federal Reserve banks in order to make profits by lending at a higher rate. The policy of the Federal Reserve authorities has never been to encourage such borrowing. Member banks borrow when they need funds to avoid a deficiency in their legal reserves. It is obvious that the present high excess reserves of member banks reduce the efficacy of the discount serving as a mechanism of control. Since 1934, discount rates have been maintained at a low level. At present, the discount rates on eligible paper are 1 per cent at the New York and Boston Federal Reserve banks and $1\frac{1}{2}$ per cent at the other ten banks.

Issuance of regulations. — Whenever a written instrument is drawn up granting certain governmental or administrative powers, the problem of interpretation arises. In order to be effective, most laws must be flexible, but in order to possess flexibility, they must be stated as broad general principles. For example, the Federal Reserve Act makes certain types of commercial paper eligible for rediscount, but declares paper arising from speculative or investment transactions ineligible. While the Board of Governors in the past has so interpreted the law as to make eligible paper synonymous with self-liquidating paper, it has nevertheless seen fit to make certain exceptions, such as farm paper arising out of the purchase of tractors. Moreover, the act places wide discretionary powers in the hands of the Board. Section 7, dealing with margin requirements, states:

For the purpose of preventing the excessive use of credit for the purchase or carrying of securities, the Board of Governors of the Federal Reserve System

shall . . . prescribe rules and regulations with respect to the amount of credit that may be initially extended and subsequently maintained on any security registered on a national securities exchange.

Not only does such a provision involve interpretation as regards the word "excessive," but it also necessitates technical and complex regulations to achieve the purpose of this section. As a matter of fact, all the daily operations require regulations and frequent interpretations, depending upon the changes occurring within the country's financial and economic structure.

In addition to the discretionary powers exercised by the Board of Governors with regard to discount rates, reserve requirements, and open-market operations, it is authorized to regulate the amount of credit that may be extended initially and later maintained by brokers, banks, and others on securities registered on the national securities exchanges. Early in 1936, when security prices were advancing rapidly and security loans were increasing, the margin requirements on security loans by banks and brokers were increased to 55 per cent. High-margin requirements have the effect of diminishing the amount of forced liquidation which a later decline in stock prices might cause. On the other hand, when security prices declined in the autumn of 1937 and the volume of security loans diminished, the Board of Governors reduced the margin requirements on security loans from 55 to 40 per cent.

In order to possess flexibility of control, the Board has power to suspend for a period of thirty days, and to renew such suspensions for periods not exceeding fifteen days, any reserve requirement stipulated in the Federal Reserve Act, providing a payment of a graduated tax upon the reserve deficiency is made by the deficient bank.

By warning member banks with respect to unsound business policies, either directly or through the Federal Reserve banks, the Board exercises some influence upon credit conditions, and through its power to order one Federal Reserve bank to discount commercial paper of another, it is in a position to equalize and pool the bank reserves of the entire country.

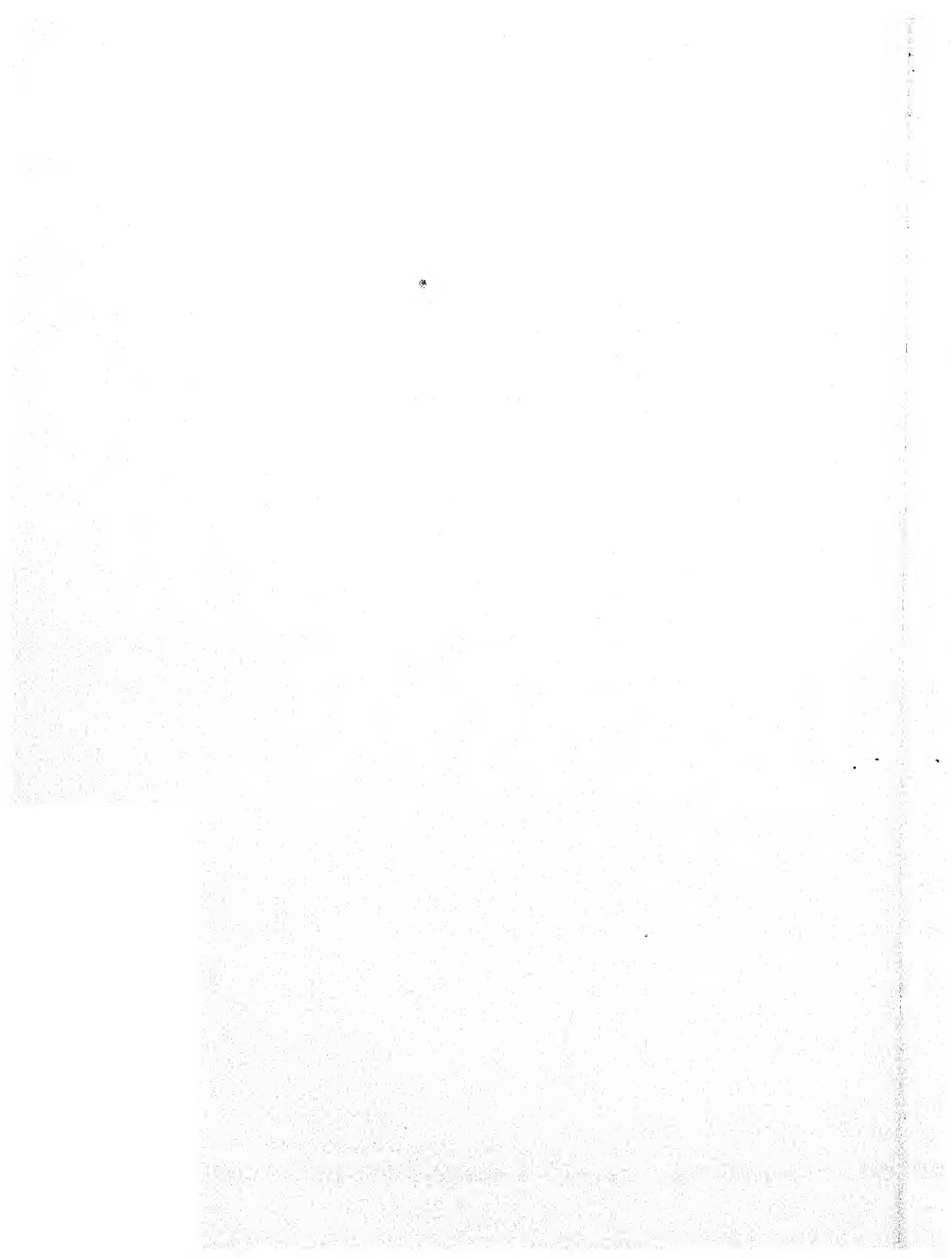
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PART THREE

THE COMMERCIAL BANKING PROCESS



CHAPTER VIII

BANKS GATHER CAPITAL FUNDS

The capital account defined. — It has been shown that a bank makes profits by holding assets in an amount several times as large as its capital funds. A commercial bank accumulates these assets by three methods, namely, (1) by receiving payments on capital stock from its owners, (2) by receiving cash, promissory notes, etc. from depositors, and (3) by the process of expanding bank credit. The first of these sources is discussed in this chapter; the others constitute the subject matter of later chapters. The capital account of a commercial bank consists of the sum of its common and preferred stock outstanding, capital notes and debentures, surplus and undivided profits, and reserves for contingencies.

The interest of the depositor in the capital account. — The money contributed by the owners of a bank is usually expended to provide a bank building and other facilities for opening a banking business. This form of bank asset does not give very much protection to depositors or other creditors of the bank because the bank building and equipment can seldom be readily converted into cash. The creditors, therefore, look for much more protection than is provided by this form of assets. In general, the total protection given to depositors and other creditors, in the absence of a system of deposit guaranty, is the liquidating value of all the bank's assets. Nevertheless, the depositors of a bank with a large volume of capital funds are better protected than those of a bank with a smaller volume of capital funds, other things being equal. Persons other than the owners are much more likely to become and remain creditors of the bank when the owners have a relatively large amount invested in the shares of the bank. In other words, the owners of a bank cannot expect to retain the confidence of their depositors unless they are willing to risk a reasonable proportion of their own funds in the banking venture. However, there exists no hard and fast rule governing the proportion of owners' as compared with other creditors' stake in a commercial bank.

Capital-stock requirements. — State and federal laws fix certain minimum requirements for the capital stock of state and national banks. These requirements, it is generally admitted, are very low, doubtless too low in the light of the fact that bank failures have been most prevalent among those banks which have barely met the minimum capital-stock requirements. Some states allow the establishment of state banks with a capital stock of \$10,000, which amount is too small to promise safety to the depositors or success to the owners. Fortunately, the capital requirements of national banks have been raised in recent years, a change which represents a reversal of the tendency of earlier years for federal laws to allow the establishment of national banks with low capital requirements in order to meet the competition of state banks.

For national banks the present minimum capital-stock requirements are as follows: In villages and towns with a population of 6,000 or less, a capital of \$50,000 is required; in places with a population greater than 6,000 and not exceeding 50,000, a capital of \$100,000 is required; for all larger cities a capital of \$200,000 is required, except in the outlying districts of those cities where the establishment of a national bank with a capital of \$100,000 is permitted, provided the state law allows the establishment there of state banks with a capital of the same amount or less. Prior to 1933 national banks with a capital of \$25,000 might operate in towns with a population of 3,000 or less.

Preferred stock. — In the Emergency Banking Act of March 9, 1933, a significant change was made in the law concerning the capital structure of national banks. Thereafter national banks were permitted to issue preferred stock and capital notes and debentures, although only common stock had been permitted prior to the passage of the legislation mentioned. State legislatures hurriedly passed legislation permitting state banks to issue the same type of securities. Beginning in 1933, these were purchased in large amount by the Reconstruction Finance Corporation. As explained in the Annual Report of the Federal Reserve Board for 1933, these purchases during the early months of the banking crisis were utilized, chiefly in connection with bank reorganizations, for the purpose of extending essential banking services to communities lacking such services. On June 16, 1933, the Banking Act of 1933 was passed providing, among other things, for the establishment of the Federal

Deposit Insurance Corporation. Thereafter the Federal Reserve Board

... cooperated in making a survey to determine the amount of new capital that might be required to strengthen active banks preparatory to their applying for participation in the Insurance Corporation. The Federal Reserve Board requested Federal Reserve Agents to keep in touch with such non-member banks in their respective districts as might require their assistance. Federal Reserve officials cooperated with state banking authorities in organizing local situations and in bringing about the prompt filing of proper applications by state banks with the Reconstruction Finance Corporation.¹

The extent to which the Reconstruction Finance Corporation participated in increasing the capital funds of banks is indicated in the following statement from the same report:

By the end of the year [1933] applications for additional capital had been received from about 5,000 banks, more than one-third of all active banks. One-third of the applicants were member banks and two-thirds were state banks not members of the Federal Reserve System. By December 31, 1933, the Reconstruction Finance Corporation had made commitments with respect to capital investments in more than 4,500 banks in an amount aggregating \$842,000,000, of which \$264,000,000 had been disbursed.²

Table 3 reveals the total capital investment of the Reconstruction Finance Corporation in commercial banks from 1934 to 1939.

TABLE 3. CAPITAL INVESTMENT OF THE RECONSTRUCTION FINANCE CORPORATION IN OPERATING INSURED BANKS, 1934-1939

<i>Date</i>	<i>Number of banks</i>	<i>Amount</i>
December 31, 1934.....	5,402.....	\$822,327,000
December 31, 1935.....	5,675.....	866,970,000
December 31, 1936.....	5,298.....	643,464,000
December 31, 1937.....	3,887.....	547,933,000
December 31, 1938.....	4,651.....	524,273,000
December 31, 1939.....	4,333.....	477,203,000

Source: *Annual Report of the Federal Deposit Insurance Corporation*, 1939, p. 146.

In addition to the outstanding amounts of preferred stock, capital notes, and debentures held by the Reconstruction Finance Corporation, this organization has made large loans to other financial institutions, including loans for distribution to depositors of closed banks

¹ *Annual Report of the Board of Governors of the Federal Reserve System*, Washington, 1933, p. 25.

² *Ibid.*, p. 26.

and advances to insurance companies as well as other loans which do not directly affect the capital structure of commercial banks.

The large decline in preferred stock, capital notes, and debentures held by the Reconstruction Finance Corporation, which decline began in 1936, reveals the desire of banks to reduce these forms of bank liabilities whenever possible. Persons who held stock in a bank prior to the issuance of preferred stock are likely to look upon the holder of the preferred stock as an outsider who might exercise the right to vote the stock in a manner not agreeable to them. Furthermore, the preferred stock is not subject to the same restrictions as are imposed upon common stock. The preferred stockholders are exempt from assessment to restore an impairment of capital, and are entitled to a dividend which is payable when the bank might not be permitted to pay dividends on the common stock. Directors of national banks are not permitted to declare dividends on common stock at any semiannual dividend-paying period, unless they have carried 10 per cent of the net profits of the previous half year to surplus. This restriction does not apply to banks with a surplus equal to the amount of the common capital stock, and it does not in any event apply to the preferred stock. The reason why bank directors wish to retire the preferred stock, capital notes, and debentures as soon as possible is obvious. In fact, the Reconstruction Finance Corporation requires the establishment of reserves out of earnings for the retirement of the preferred stock. Banks may also accomplish this by the sale of new common stock.

Surplus and undivided profits. — The Banking Act of 1935 requires a newly organized national bank to begin business with a paid-in surplus of 20 per cent or more of its capital. In most instances this requirement is met by the sale of common stock at an amount above par sufficient to provide the necessary contributed surplus and perhaps to absorb necessary organization expenses as well. When a bank with a record of successful operation over a period of years wishes to increase its capitalization by the issuance of new common stock, this stock usually sells at a premium because the issuing bank ordinarily maintains a surplus which gives that stock a book value above its par value.

According to the accounting practice universally adopted by banks, surplus is divided into two accounts — surplus and undivided profits. The surplus account, as distinguished from undivided

profits, is usually allowed to remain unchanged over a considerable period of time. It changes by order of the board of directors, while the undivided-profits account changes with the more or less regular action of the accountants when they post operating expenses and earnings.

A newly organized bank begins business with a paid-in or contributed surplus, while thereafter the board of directors may take the following actions with respect to it:

1. When undivided profits are built up by reason of good earnings and a willingness on the part of the owners to allow them to accumulate rather than to increase dividend payments, the directors may order an increase in surplus by a corresponding reduction of undivided profits.
2. When losses are extraordinarily heavy, the directors may charge them to surplus rather than to undivided profits.
3. When transfers from surplus account to capital stock account are made, the size of the one compared with the other is, obviously, changed.
4. When dividend payments or other cash payments are charged to surplus, rather than to undivided profits, the surplus account suffers a decline.

The approval of the appropriate federal or state authorities is required if changes are to be made in the capital stock of a bank. Federal regulations require the assent of the holders of two-thirds of the common stock and the approval of the Comptroller of the Currency before the directors of a national bank may order an increase in the authorized capital stock. These regulations also stipulate that the surplus must be equal to 20 per cent of the authorized capital stock after any change in the total amount is made, whether the new stock is sold for cash or is a result of the declaration of a stock dividend. A reduction in the capital stock of a national bank requires the approval of the Board of Governors of the Federal Reserve System and that of the Comptroller of the Currency, which approval can be given only if the reduction leaves the remaining stock outstanding equal to or greater than the required legal minimum. Whether this approval can be given depends upon the population of the town or city in which the bank is located.

Sometimes it is assumed that surplus is represented on the asset side of a bank's financial statement by long-term assets such as

bonds. The reason for this assertion is that the capital stock and surplus of a bank represent claims not subject to immediate withdrawal, as is true of demand deposits. As a matter of fact, however, the bond accounts of commercial banks fail to reveal a close correlation with the amount of the surplus of those banks. The history of commercial banking in the United States reveals frequent occasions when bond investments fall as surplus rises, and vice versa.

Although it may be convenient to think of surplus as being invested in part in bank building and equipment, and in part in bonds, it is a mistake to think of surplus and undivided profits as representing any particular form of asset. The capital account, as heretofore defined, is the property of the stockholders and as such represents their claim over or equity in the general assets of the banking corporation. Hence surplus is a valuation account which is determined in part by the amount that the stockholders are willing to pay into this account, and in part by the book valuation of the assets of a bank. The total liabilities of a bank to its creditors plus the capitalization subtracted from the book valuation of the assets of a bank is its surplus. The book valuation of the assets of a bank cannot be accurate in the sense that it represents the exact liquidating value of those assets. If the book valuation is less than the actual market value of the assets, the surplus and undivided profits are understated. If the book valuation is more than the actual market value of the assets, the creditors of the bank have less protection than is indicated by the total of its surplus and undivided profits.

There is no hard and fast rule by which an accurate valuation of bank assets is determined. The accounting policy of a bank and the appraisal policies of the state and federal bank examiners settle this question. The accounting policy of a bank largely determines such points as what the amount of the depreciation on banking house, furniture, and fixtures shall be. A few banks have placed the book valuation of their banking house and equipment as low as \$1. Others may place a book valuation on this type of asset much greater than its market value in a forced liquidation. In general, good accounting policy requires a conservative book valuation on banking house, furniture, and fixtures.

The dividend policy of a bank also affects the size of its undivided

profits and surplus. This policy is partly a matter of law and partly a matter of the discretion of its board of directors. Practice varies greatly with respect to it. The welfare of the depositors and the strength of the whole banking system are related to the dividend policy of banks because it is one element in the determination of the amount of the assets which will be available to meet claims in the event of a forced liquidation of those assets. Good banking policy requires that dividends shall not be paid if their payment jeopardizes the position of the depositors.

Proprietorship reserves. — A further matter of policy on the part of bankers and bank examiners relates to the proprietorship reserves of a bank. A bank may set aside out of undivided profits a reserve for contingencies, which reserve is a part of the capital account of that bank. A large reserve for contingencies reflects a disposition on the part of the bankers in question to give as much protection as possible to the creditors of their bank. Special reserves may be set up for protection against a decline in the value of certain assets, such as government bonds or the other securities. When a bank holds a very large proportion of its assets in one type of risk, for example, government securities, good policy dictates that a reserve be built up in order that a severe decline in the market value of those securities can be met. Since the commercial banks of the United States hold a very large percentage of their total earning assets in bonds at the present time, these special proprietorship reserves have taken on a greater significance than ever before.

One of the important considerations relating to a bank's surplus, undivided profits, and proprietorship reserves is that the danger of instability in the operation of a banking business is minimized when these items are large. In the event of a period of operating deficits, the bank might find it necessary to assess the stockholders if these items are not adequate. When assessments are necessary, the less wealthy stockholders might find it difficult or impossible to meet them. They might then be forced to sell their stock, possibly at a loss, which would result in readjustment in the control of the bank. Hence the present body of stockholders, as well as depositors, is interested in the maintenance of an adequate capital account, which includes the proprietorship reserves, as well as undivided profits and surplus.

Another special proprietorship reserve, which has arisen from the recent problems of commercial banking in the United States, is the special reserve for the retirement of preferred stock. Attention has been called to the nature of this preferred stock and the circumstances surrounding its flotation. The desire on the part of the shareholders to rid themselves of the burden of supporting this form of capitalization has led the board of directors of many banks to set up this type of reserve account.

CAPITAL ACCOUNT AND BANK EARNINGS

It might be said that the maintenance of a large capital account, in favor of which some considerations have been advanced in preceding paragraphs, jeopardizes the earning position of a bank. There would seem to be some justification for this assertion, for a low ratio of earning assets to capital account necessitates a high rate of return on loans and investments, if high net profits per \$100 of invested capital are to be achieved. Conversely, a high ratio of earning assets to capital account would seem to produce a high rate of return on invested capital (capital account) unless the yield on earning assets is exceptionally low.

The record of earnings of national banks since 1890, however, seems to indicate the ability of those banks to make a fair return on invested capital whether the ratio referred to is high or low. Table 4 reveals the loans and investments of national banks per \$1 of total resources and per \$1 of invested capital, and net profits per \$100 of invested capital for the period from 1890 to 1939.

A partial explanation of the ability of the national banks or other commercial banks to produce high returns on invested capital despite a relatively low volume of earning assets (loans and investments) in the earlier years, as revealed by Table 4, is that the prevailing rate of interest was high during those years. In later years, with the decline in the prevailing rate of interest, a rise in the ratio of earning assets to invested capital made possible the maintenance of equally high amounts of net profits on invested capital.

Table 4 indicates, furthermore, that bank earnings are affected in greater measure by losses on loans and investments than by the particular ratio which prevails in any one year between earning assets and invested capital. This ratio cannot explain the severe operating losses that banks suffered in the period from 1932 to 1934,

TABLE 4. LOANS AND INVESTMENTS OF NATIONAL BANKS PER \$1 OF TOTAL RESOURCES AND PER \$1 OF INVESTED CAPITAL, AND NET PROFITS PER \$100 OF INVESTED CAPITAL, 1890-1939 *

Year	Loans and investments per \$1 of		Net profits ** per \$100 of invested capital	Year	Loans and investments per \$1 of		Net profits ** per \$100 of invested capital
	Total resources	Invested capital †			Total resources	Invested capital †	
1890.....	\$.73	\$2.39	\$7.71	1916.....	\$.73	\$4.81	\$7.49
1891.....	.73	2.29	7.67	1917.....	.73	5.40	8.84
1892.....	.71	2.43	6.59	1918.....	.74	6.05	9.44
1893.....	.74	2.30	6.68	1919.....	.74	6.62	10.17
1894.....	.70	2.38	4.19	1920.....	.71	6.33	10.76
1895.....	.71	2.50	4.75	1921.....	.74	5.42	7.73
1896.....	.69	2.48	5.06	1922.....	.76	5.55	6.45
1897.....	.69	2.56	4.60	1923.....	.79	5.88	7.08
1898.....	.68	2.85	5.24	1924.....	.76	5.87	6.71
1899.....	.67	3.34	5.74	1925.....	.76	6.20	7.54
1900.....	.69	3.37	8.61	1926.....	.76	6.24	8.07
1901.....	.68	3.64	7.70	All Member Banks			
1902.....	.70	3.54	9.00	1927.....	.77	6.34	8.66
1903.....	.72	3.51	8.55	1928.....	.76	6.18	8.96
1904.....	.71	3.52	8.37	1929.....	.75	5.62	8.75
1905.....	.71	3.67	7.53	1930.....	.75	5.26	4.56
1906.....	.71	3.70	8.55	1931.....	.76	5.23	.19
1907.....	.72	3.80	9.49	1932.....	.77	5.04	†† - 4.50
1908.....	.71	3.73	7.87	1933.....	.75	5.10	†† - 7.26
1909.....	.71	3.85	7.52	1934.....	.72	5.33	†† - 4.45
1910.....	.71	3.82	8.33	1935.....	.69	5.65	4.14
1911.....	.71	3.83	8.12	1936.....	.68	6.02	8.93
1912.....	.72	3.95	7.51	1937.....	.68	6.10	6.32
1913.....	.73	3.94	7.87	1938.....	.66	5.86	4.93
1914.....	.73	4.08	7.28	1939.....	.64	5.97	6.33
1915.....	.74	4.15	6.03				

Source: *Federal Reserve Bulletin*, February 1938, p. 116, and *Member Bank Call Reports*, 1938-1939.

* Loans and investments, invested capital, and total resources as of call nearest June 30 in each year. Net profits figures for fiscal years ending August 31, 1890-1906; 10 months September 1, 1906-June 30, 1907; and thereafter for fiscal years ending June 30.

† Invested capital includes common and preferred stock, surplus, undivided profits, reserves for contingencies, and funds for the retirement of preferred stock.

** Available for dividends.

†† Deficit.

NOTE. — The data in this table and others relating to national banks include the figures of nonmember national banks located in United States possessions except for the year 1937, which covers only the member national banks.

nor can it explain high net profits for the period of war-financing, 1918-1920. It may be said, however, that the deficits suffered by banks in their operations between 1932 and 1934 might have been greater if the ratio between earning assets and invested capital had been higher. From 1918 to 1920, the extraordinarily high net profits might not have been achieved if the same ratio had been lower.

TABLE 5. RATIO OF LOANS AND INVESTMENTS TO CAPITAL ACCOUNT OF ALL MEMBER BANKS, 1921-1939

(In millions of dollars)

<i>Call dates</i>	<i>Loans and investments</i>	<i>Capital account</i>	<i>Ratio</i>
December 31, 1921	23,482	4,093	5.74
December 29, 1922	25,579	4,364	5.86
December 31, 1923	26,487	4,378	6.05
December 31, 1924	28,796	4,532	6.34
December 31, 1925	30,884	4,678	6.60
December 31, 1926	31,642	4,944	6.40
December 31, 1927	34,247	5,341	6.41
December 31, 1928	35,684	5,899	6.05
December 31, 1929	35,934	6,709	5.36
December 31, 1930	34,860	6,593	5.29
December 31, 1931	30,575	5,999	5.10
December 31, 1932	27,469	5,409	5.08
December 30, 1933	25,220	4,962	5.08
December 30, 1934	28,150	5,954	5.57
December 31, 1935	29,985	5,145	5.83
December 31, 1936	33,000	5,275	6.22
December 31, 1937	31,752	5,371	5.90
December 31, 1938	32,070	5,424	5.91
December 30, 1939	33,941	5,522	6.11

Source: Annual reports of the Board of Governors of the Federal Reserve System.

The capital account and earning assets. — Table 5 presents a picture of the loans and investments of the member banks of the Federal Reserve System, their capital account and the ratio between loans and investments and capital account. The range in the ratio is between a low point of 5.08 in 1932 and 1933 and a high point of 6.60 in 1925. The year of highest loans and investments was 1929, with a total of \$35,934,000,000. This year was also the high with respect to capital account, with a total of \$6,709,000,000, which resulted in a ratio somewhat lower than the highest ratio for

the years under discussion. Evidently the banks during this year, and those immediately preceding it, were building up their proprietorship accounts somewhat faster than the rate of their credit expansion.

In the depression years of 1931, 1932, and 1933, the total loans and investments declined from a high point of \$35,934,000,000 in 1929 to a low point of \$25,220,000,000 in 1933. In the same years, the capital accounts declined from \$6,709,000,000 to \$4,962,000,000.⁴ The average figures for the year 1929 were \$35,727,000,000 in loans and investments and \$6,360,306,000 in invested capital. For 1933, average loans and investments amounted to \$24,987,000,000, and average capital, \$4,902,319,000. The volume of loans and investments declined more than the volume of the capital accounts. The conclusion may be reached from these figures that changes in the capital accounts of banks lag behind changes in the volume of their earning assets during periods of bank-credit contraction, as well as in periods of bank-credit expansion.

TABLE 6. INVESTED CAPITAL AND DEPOSITS, EXCLUSIVE OF INTERBANK DEPOSITS, OF ALL MEMBER BANKS AND RATIO OF DEPOSITS TO INVESTED CAPITAL, 1927-1939

(In millions of dollars)

<i>Year</i>	<i>Deposits *</i>	<i>Invested capital **</i>	<i>Ratio of deposits to invested capital</i>
1927	31,268	5,163	6.06
1928	32,790	5,622	5.83
1929	33,438	6,360	5.26
1930	32,807	6,723	4.88
1931	30,436	6,396	4.76
1932	25,476	5,660	4.50
1933	23,841	4,902	4.86
1934	26,421	5,050	5.03
1935	30,052	5,118	5.87
1936	33,481	5,209	6.43
1937	35,222	5,371	6.56
1938	34,990	5,424	6.45
1939	38,363	5,522	6.95

Source: *Federal Reserve Bulletins and Member Bank Call Reports*, 1927-1939.

* Exclusive of interbank deposits. Figures are averages of all call dates during each year and the December 31 figure for previous year.

** Figures are for December 31.

⁴ These figures are as of December 31.

The capital account and deposits. — Table 6 reveals the relationship between the invested capital, or capital account, of member banks and their deposits, exclusive of interbank deposits. The averages indicated are computed by adding the figures for each call date during each year and the last call date of the previous year and dividing by the number of call dates involved. The ratios are computed by dividing average deposits for each period by the average invested capital for the same period.

The increase in average deposits from 1927 to 1929 was accompanied by a larger proportionate increase in invested capital. During the period from 1929 to 1933 when deposits were decreasing in very large amounts, the invested capital decreased, but at a much slower rate. In other words, deposits increased in the earlier years of the period from 1927 to 1932 at a slower rate than did invested capital, but decreased at a faster rate in the later years. In the period from 1933 to 1937, however, deposits increased at a faster rate than did invested capital.

The explanation for this change in behavior of deposits and invested capital is doubtless to be found in the earning position of commercial banks during the period 1927 to 1929 as compared with that of 1933 to 1937. In the first of these periods, all member banks had a net annual rate of return of 5.5 per cent on their loans and 5.1 per cent on their investments. In the period from 1933 to 1937, they had a net annual rate of return on their loans varying from 1 per cent in 1934 to 3.2 per cent in 1936, while the net annual rate of return on their investments varied from 1.3 per cent in 1933 to 4.0 per cent in 1936. These figures on net annual rates of return computed by the Division of Research and Statistics of the Board of Governors of the Federal Reserve System⁵ take losses and recoveries on loans and investments into consideration. It is evident that the member banks by reason of higher earnings in 1927 to 1929 were able to build up their invested capital to higher levels than was possible in the period from 1933 to 1937.

This analysis indicates that the invested capital of commercial banks rises as deposits rise and decreases as deposits decrease, but that the rate of increase or decrease depends in large part on the net annual rate of return on their loans and investments.

⁵ Presented in the *Federal Reserve Bulletin*, February 1938, p. 214.

CAPITAL ACCOUNT AND CREDIT EXPANSION

In general, a high ratio between earning assets and capital account indicates greater profit-making opportunities in banking operations than would exist under a low ratio between the same items. The same is true of the ratio between capital account and total deposits. It would seem to follow from these observations that high ratios of this character would exist in periods of bank-credit expansion since high earnings have usually been produced in such periods.

There exists, however, a neglected point in this reasoning, namely, that bank-credit expansion creates bank capital as the income from a larger volume of earning assets is added to undivided profits. In fact, the rate of bank capital accumulation may be greater than the percentage increase in bank credit outstanding in a period of general bank-credit expansion. Attention has already been called to the fact that the capital accounts of member banks rose faster than their deposits in the period from 1927 to 1929. The rate of increase in capital account was also greater than the rate of increase in their loans and investments. Evidently the size of the capital account was no handicap to bank-credit expansion.

In other circumstances, however, the size of the capital account of commercial banks may be a handicap to further expansion. From the beginning of 1934 to the end of 1939, member-bank loans and investments and deposits increased. Capital accounts did not increase proportionately. The ratio of earning assets and deposits to capital account, therefore, increased. The very low yields on earning assets in this period made difficult an expansion of the capital accounts of banks out of their current earnings.

It should be stated in this connection that the Federal Deposit Insurance Corporation regards with disfavor an extremely high ratio between deposits and capital account. If this disfavor is translated into an insistence that this ratio be kept below a certain point, the size of the capital account presents a handicap to bank-credit expansion. Under these circumstances, banks will find it necessary, if they wish to engage in further credit expansion, to take one or more of the following actions: (1) invest in assets that yield a higher rate of return, (2) lower their interest payments on time deposits, (3) pay lower dividends on stock, (4) issue more stock — preferred

or common, (5) submit the common stockholders to capital assessments, or (6) increase charges for services rendered.

During the period from 1934 to 1939, member banks and non-member banks failed to find investments with higher yields and resorted to one or more of the other alternatives. Despite these actions, the ratio of deposits to capital increased. This ratio, obviously, cannot continue to increase indefinitely; it inevitably reaches a point where further credit expansion cannot take place unless new capital is accumulated. Since it may be difficult to provide new capital precisely when it is needed, it seems clear that the size of the capital accounts of commercial banks is a factor to be taken into consideration in an analysis of bank-credit expansion, especially during a period when the yield on earning assets is very low.

THE NEED FOR MORE ADEQUATE BANK CAPITAL

Hardy has made a study of the tendency in the United States and other countries toward a declining ratio of bank capital to total assets. The results of this study are contained in Table 7 and Table 8. "This development," Hardy finds, "is in no way peculiar to American banking. The ratio of stockholders' investment to total resources of the banks was materially reduced during the war period. After the war, . . . prewar margins of safety were nowhere restored; indeed in many cases grew worse."⁶

TABLE 7. PERCENTAGE OF STOCK AND SURPLUS TO TOTAL ASSETS FOR BANKS IN THE UNITED STATES IN SELECTED YEARS

<i>Year</i>	<i>Percentage</i>	<i>Year</i>	<i>Percentage</i>
1873	23.7	1923	12.6
1883	23.1	1924	12.3
1893	24.7	1925	11.9
1898	20.0	1926	12.0
1903	18.1	1927	12.1
1908	18.0	1928	12.4
1913	16.9	1929	11.6
1918	12.0	1930	13.5
1921	12.8	1931	13.5
1922	13.0		

Source: Hardy, C. O., *Credit Policies of the Federal Reserve System*, Washington: The Brookings Institution, 1932, p. 345.

⁶ Hardy, C. O., *Credit Policies of the Federal Reserve System*, p. 346. Washington: The Brookings Institution, 1932.

The adequacy of capital funds. — The problem concerning the adequacy of the capital funds of commercial banks cannot be solved wholly in terms of the size or volume of those capital funds.

TABLE 8. AGGREGATE CAPITAL, SURPLUS, AND UNDIVIDED PROFITS OF PRINCIPAL COMMERCIAL BANKS AS PERCENTAGE OF TOTAL ASSETS, BY COUNTRIES

Country	1913	1919	1929
Argentina.....	26.7	13.9 *	11.9
Austria.....	21.0	9.0	13.7
Belgium.....	20.9	14.3 †	22.2
Brazil.....	19.9	9.8	10.8
Canada.....	15.7	8.8	9.1
Denmark.....	23.5	13.9	15.7
England and Wales.....	9.0	5.2	6.6
Finland.....	19.2	18.5	17.7
France.....	16.2	7.9	8.1
Germany.....	25.0	6.7	8.1
Greece.....	31.4 **	11.6	13.8
Hungary.....	16.8		15.3
Ireland.....	12.8	6.4	9.3
Italy.....	22.7	8.4	12.0
Netherlands.....	31.3	22.2	21.5
Peru.....	18.5	9.6	20.0 ††
Scotland.....	11.6	5.8	9.5
Sweden.....	23.0	14.7	15.3
Switzerland.....	15.9	13.1	12.8
Union of South Africa.....	12.9	6.8	9.9

Source: Hardy, C. O., *Credit Policies of the Federal Reserve System*, Washington: The Brookings Institution, 1932, p. 347. Computed from figures given in League of Nations pub. 1931, IIA. 26, Memorandum on Commercial Banks 1913-1929.

* For 1921, 1919 not available

† For 1920, 1919 not available

** For 1914, 1913 not available

†† For 1928, last year not available

The chief reason for insisting upon adequate capital funds is that the general safety of the banking structure is in part dependent on them. It must be remembered, however, that in the last analysis the degree of safety of bank deposits is to be found in the liquidating value of the assets of the bank or banks in question. It is possible that the depositors of one bank with a low ratio of deposits to capital funds may be less well-protected than the depositors of another bank with a high ratio of deposits to capital funds. This may be true because the second bank has assets of higher quality than

the first bank. Assuming that there are assets of equal quality in both banks, then the depositors of the second bank are less well protected. This is true because upon liquidation the claims of the depositors are given preference over those of the owners.

Since the claims of the depositors of banks at the present time are larger in proportion to the total liabilities of banks than was the case prior to 1913, according to Hardy's computations, it is reasonable to expect that banks in general must be required to maintain the highest possible quality of assets. Two considerations require the maintenance of high-quality assets to support the deposit liability of banks. The first of these is the repeal of the federal law and many state laws which imposed double liability on the stockholders of banks. These laws were designed to offer protection to the depositors and to provide an incentive to good bank management. It is to be admitted that they did not provide the degree of protection that it was expected they would supply. They were invoked mostly in depression periods when stockholders could not meet the burden of double liability, hence collections were slow and uncertain. Regulations that assure good asset management provide greater protection to depositors than the double liability of stockholders.

The second consideration which justifies the insistence upon high-quality assets is that the depositors in many banks today are paying high service charges on their checking accounts. It would appear entirely unjustifiable for a bank to impose high service charges upon its depositors and at the same time to place the bulk of its funds in high-yield, low-quality assets. In effect, the service charges which depositors pay are payments for an assurance that high-quality assets support the deposit liability of the banks which impose them.

In the last analysis the adequacy of the capital of the commercial banks depends upon the wisdom of management, the quality of assets, and the economic conditions of the country as a whole, as well as upon the volume of their capital funds.

The analysis of capital accounts by the F.D.I.C. — In its report for 1939, the Federal Deposit Insurance Corporation reveals its analysis of the net sound capital of the insured commercial banks. This analysis shows that

... more than one-fifth of the banks, holding almost three-fifths of the deposits in all insured commercial banks, had net sound capital of less than 10 per

cent of the appraised value of assets. Ten of these banks with deposits of \$10 million had no net capital at all after adjustment for estimated losses and for assets of doubtful value, and 75 other banks with deposits of \$348 million, had net sound capital of less than 5 per cent of the appraised value of assets. Thirty of the 75 banks had no net sound capital except that represented by investment of the Reconstruction Finance Corporation. Approximately 4,700 banks had net sound capital equal to more than 15 per cent of the appraised value of their assets.⁷

TABLE 9. SUBSTANDARD ASSET AND NET SOUND CAPITAL RATIOS, EXAMINATION IN 1939

(Insured commercial banks grouped by amount of deposits)

	Number of banks	Substandard assets per \$100 of appraised value of assets	Net sound capital per \$100 of —	
			Appraised value of assets	Total capital accounts
<i>All banks</i>	13,505	\$5.12	\$10.63	\$95.18
<i>Banks with deposits of —</i>				
\$100,000 or less	488	11.79	25.55	92.28
\$100,000 to \$250,000	2,486	8.90	17.50	94.70
\$250,000 to \$500,000	3,118	7.51	14.30	95.20
\$500,000 to \$1,000,000	2,937	7.26	13.27	94.67
\$1,000,000 to \$2,000,000	2,064	7.62	12.54	93.29
\$2,000,000 to \$5,000,000	1,425	7.41	12.13	93.43
\$5,000,000 to \$10,000,000	487	6.67	11.52	94.64
\$10,000,000 to \$50,000,000	383	5.72	10.20	94.55
More than \$50,000,000	117	3.85	9.74	96.11

Source: *Annual Report of the Federal Deposit Insurance Corporation*, 1939, p. 48.

In previous years, the F. D. I. C. had emphasized the desirability of keeping the capital funds of each insured bank at a level above 10 per cent of its deposits. In its report for 1939, the Corporation shifted the emphasis away from a relationship of capital funds to deposits toward the relationship between net sound capital and the appraised value of assets. Net sound capital represents total capital accounts less examiners' deductions (net) from capital. In other words, it is the examiners' evaluation of the net worth of the bank or the equity of stockholders (including holders of capital notes and debentures) in each bank. The examiners' deductions (net) from

⁷ *Annual Report of the Federal Deposit Insurance Corporation*, 1939, pp. 49-50.

assets represent the amount by which the examiners' evaluation of each bank's assets is less than the value carried by the bank on its books. The term substandard is applied to those loans, securities, and fixed and miscellaneous assets that are regarded as involving a substantial or unreasonable degree of risk, and hence undesirable or hazardous for bank investment.⁸

Table 9 reveals the percentage of substandard assets and net sound capital per \$100 of the appraised value of the assets of insured banks at the time of the 1939 examinations by the Federal Deposit Insurance Corporation.

Table 9 shows that the small banks had more capital per \$100 of appraised value of assets than the large banks. The large banks, however, had a much smaller proportion of substandard assets to appraised value of total assets than the small banking institutions.

The Federal Deposit Insurance Corporation in its report for 1939 deplores the present low level of the capital ratio, which it traces, as does Hardy (see Tables 7 and 8), to previous periods of rapid growth in assets. "This experience," it says, "provides us with no reason to believe that, in the absence of the adoption of definite supervisory standards, present unsatisfactory capital positions will be corrected or will not deteriorate even further. The Corporation believes that every bank should have a minimum net sound capital equal to at least 10 per cent of the appraised value of its assets."⁹ It estimates that about \$600,000,000 of additional capital is needed to bring the capital account of 2,884 of the insured banks up to this minimum.

⁸ *Annual Report of the Federal Deposit Insurance Corporation, 1939*, pp. 74-75.

⁹ *Ibid.*, p. 12.

CHAPTER IX

BANKS ACCUMULATE DEPOSITS

Introduction. — Following the analysis of the capital account of a bank in the last chapter, a description of the commercial banking process, as it is presented in this study, requires a discussion of bank deposits. The logic of this order of presentation, it will be remembered, lies in the fact that the organizers of a bank, having contributed to its original capital stock and surplus, invite others to deposit cash, notes, etc. with their banking corporation. Four main factors relating to commercial bank deposits will be presented in this chapter, the motives promoting people to deposit funds with banks, the creation of deposit credit, changes in the volume of deposit currency, and the protection afforded the depositors through deposit insurance. The significance of changes in the velocity of deposit currency is discussed in Chapter XIII.

MOTIVES OF DEPOSITORS

Why deposits are made. — Among the motives which prompt persons to deposit cash funds with commercial banks, the following five are the most important.

First, the depositor receives a convenient means of payment. If a person could as conveniently make payments with bank notes or Treasury currency, he would, presumably, use them instead of deposit currency, that is, bank deposits against which checks can be drawn. One of the convenient uses of checks is the payment of sums in terms of dollars and cents by means of a single instrument, whereas payment by legal-tender note or subsidiary currency oftener than not requires more than one instrument. Moreover, the use of checks often obviates the expense and inconvenience of counting coins or bank and government notes, and the expense of preparation for shipment, insurance, and the like. Another convenience is the canceled check which serves as a receipt for the payment, often making unnecessary an additional instrument. This

motive for making deposits, namely, the convenience of making payments by means of checks, is a very important element in explaining the fact that checks are used to make more than 90 per cent of the total payments in the United States in most years.

Second, the depositor may receive many services from his bank for a fee. These services are rendered by the transfer and collection departments, the safety deposit department, the bond department, as well as other departments, and by the general personnel of the bank.

Third, in return for the maintenance of a credit balance, the depositor receives a "line of credit" from a bank. This exchange does not rest upon any legal foundation, but rather upon an implied responsibility on the part of a bank to accommodate the depositor with loans of the type the bank can provide when applications for them are made. By reason of this implied responsibility, which banks are usually pleased to assume, a close personal relationship usually exists between the depositor and his bank. This relationship does not exist in other money markets; for example, it does not exist in the open market for short-term loans. It might be added that the relationship between the borrower and the bank often creates a feeling of obligation on the part of the borrower to continue making needed loans with his local bank, even though cheaper credit accommodations might for a time be obtained elsewhere. This attitude does not arise from altruistic motives, but rather from a realization that a dependable line of credit is more valuable than an undependable one, despite the fact that the latter alternative may temporarily be more attractive.

Fourth, the depositor may receive interest on his deposits. This service applied formerly to both demand and time deposits. A recent amendment to the Federal Reserve Act, however, prohibits member banks from paying interest directly or indirectly on demand deposits. Thus, the receipt of interest has become a motive for making time deposits only. Time deposits appeal to many small depositors who are unwilling to supervise or unable to invest their funds in securities, real estate, etc. Some individuals and organizations make time deposits of large sums which would otherwise lie idle. The tendency in recent years has been toward the payment of lower rates on time deposits as a result of the very low yield that banks receive on most of their earning assets.

Fifth, the depositor's funds are ordinarily safer in a bank than in his personal possession. In a technical sense, the depositor has no money or funds in a bank; he has merely a claim on the bank. When a depositor says that he has money "safely tucked away in a bank," he means that he regards his claim against the bank as being good. When a bank provides vaults and mechanical devices for the protection of money in its possession, it recognizes one of its functions, namely, the safekeeping of money. This protection may be adequate for an individual depositor since his bank probably keeps safely in its vaults enough legal-tender money to meet ordinary demands. The money in the vaults of a bank is not adequate, however, to meet the demands of all depositors at the same time. Safekeeping, therefore, applies only to cash which is a small portion of bank deposits and loses much of its significance when applied to all deposits. As has been said earlier, in the last analysis, the safety of the total deposits of a bank depends on the liquidating value of its total assets.

THE CREATION OF DEPOSIT CREDIT

A somewhat misleading picture of commercial-banking operations is presented when it is said that the owners of commercial banks contribute the original capital funds, invite other persons to deposit funds with them, and then convert the total of the funds derived from these sources into earning assets. This picture is likely to give the impression that commercial banks perform only the function of safekeeping or, at best, a trust function. The inadequacy of the illustration lies in its failure to call attention to the fact that the banking process creates deposit credit.

A commercial bank does more than keep the funds of its customers in a safe place; it does more than invest the funds of its owners and depositors in safe investments. If its operations were limited to the performance of these functions, there would be little to distinguish commercial banks from private moneylenders, savings banks, trust companies, or investment trusts.

The uniqueness of the operations of a commercial bank is derived from its membership in a banking system. Largely by reason of this fact a commercial bank can create deposit currency. The process by which this is done may be briefly described as follows: One of the commercial banks lends a customer funds which would

otherwise lie idle as excess reserves. The customer receives a deposit credit in exchange for his promissory note to the amount of the proceeds of the loan. He draws checks against that deposit credit in favor of a person or a business firm which deposits these checks with other banks. These banks are then able to expand loans to their customers, who, in turn, will draw checks in favor of depositors of still other banks. If the process of bank-credit expansion is widespread throughout the banking system, each of the banks in the system is likely to receive checks drawn against the deposits created by the loans of other banks, leaving each bank in a position to create more deposit currency through further extension of loans.

In order to avoid a possible confusion of thought on this subject, let us assume that a Cincinnati bank makes a loan to a customer and that this bank is able to do so by reason of the fact that it has a greater amount of reserves than the law requires. The customer to whom this loan is granted draws checks against the deposit credit he receives, in favor of business firms in Chicago, Pittsburgh, Cleveland, and New York. As these checks return to Cincinnati through the regular clearing channels, they reduce the amount of the excess reserves of the bank against which they are drawn, unless the customers of the banks in the other financial centers are drawing checks in favor of Cincinnati firms who deposit them in the Cincinnati bank in question. When the banks of all these financial centers are making loans in about the same volume, their customers are likely to be drawing checks in favor of each other for about the same amounts. In this event, the banks of each center will not be distressed by persistent adverse clearing-house balances. Each bank will be in a position to expand its loans to customers further, so long as it does not do so in greater volume than the others. The limitations on this process are explained in Chapter XIV.

Primary and derivative deposits. — Primary deposits arise from the presentation to a bank of cash and all forms of checks drawn against other banks in exchange for credits to the depositors' accounts. They are to be distinguished from derivative deposits, that is, additions to the deposit liabilities of a bank given in exchange for the promissory notes of the bank's customers. In other words, derivative deposits are derived from the loans of a bank.

In order to make the distinction between primary and derivative deposits as clear as possible, let us assume that depositor A brings to his bank cash and checks drawn against other banks, while depositor B borrows from his bank and receives deposit credit in exchange for his promissory note. The transaction involving depositor A gives the bank a larger reserve in the form of cash or deposit credit with the reserve bank. This cash or reserve credit may, in subsequent transactions, be utilized in acquiring other forms of bank assets. The transaction involving depositor B gives the bank neither cash nor deposit credit with the reserve bank. Instead, the bank's unused reserve is lessened because its deposit liabilities have increased and it has received from the transaction, directly and immediately, no cash or other reserve.

Thus far the difference between primary and derivative deposits has been analyzed from the point of view of the individual bank. From this point of view, checks on other banks were considered to be primary deposits by the bank that received them. Let us now analyze the difference between primary and derivative deposits from the point of view of the whole banking system. In doing so, the whole banking system might be visualized as one big bank. Checks received by this one big bank must then necessarily be drawn against the same bank. Upon receiving them, it merely credits the account of one of its customers and debits the accounts of others. It receives no additional cash or free reserve balances from this procedure. We conclude, therefore, that the primary deposits of the whole banking system consist only of deposits of cash, that is, legal-tender money.

The primary deposits of the banking system may be increased by additions to the money supply received from (1) the government through its powers to coin money and to issue legal-tender notes, (2) the central bank through its power to issue notes, and (3) net imports of gold and silver which are coined or which otherwise find their way into the domestic supply of money. The derivative deposits of the banking system may be increased through the process of bank credit expansion. The limitations on the creation of derivative deposits from the point of view of the individual bank and from the point of view of the banking system will be discussed in Chapter XIV.

REGULATION OF INTEREST ON DEPOSITS

Prohibition of interest on demand deposits. — Competition among banks for primary deposits has been especially severe during periods when banks received a high rate of return on their earning assets. In some regions, banks once paid as high as 5 per cent on time deposits for the use of depositors' funds. This competition was not limited to high payments on time deposits, but extended to demand deposits as well. Perhaps this situation may be attributed to the structure of our banking system, which is made up of a very large number of competing unit banks. At least, it is unlikely that the same situation would have developed under a well-integrated system of branch banking. Whatever the reasons for its development, bankers long ago came to realize its seriousness and sought, by several forms of mutual agreements such as clearing-house regulations, to control it. Although some progress toward control was made, it was not until recent years that the situation concerning this banking problem could be considered satisfactory to the bankers.

The depression years of the early 1930's, characterized by relatively few opportunities for the investment of bank funds, low yields on earning assets, and a tremendous volume of nonearning assets in the possession of the banks, forced the banks into a greater degree of cooperation to cope with the problem. The banks of New York City, by voluntary action, reduced the interest rates on demand deposits to $\frac{1}{4}$ of 1 per cent. Subsequently, Congress took action on this question.

The Banking Acts of 1933 and 1935 amended the Federal Reserve Act by prohibiting interest payments on demand deposits, and provided for control of the interest rates on time, savings, and trust deposits by the Board of Governors of the Federal Reserve System. The regulation reads, in part, that no member bank "shall, directly or indirectly, by any device whatsoever, pay any interest on any deposit which is payable on demand." Some minor exceptions are made, namely, payment may continue on (1) contracts in effect on June 16, 1933; (2) deposits payable only at an office located outside the states of the United States and the District of Columbia, and (3) any deposits, until August 23, 1937 (the date was later extended), made by a savings bank and any deposits

of public funds or trust funds, if the payment of interest on such public deposits is required by state law.

Limitations on time deposits. — By the same amendment to the Federal Reserve Act, the Board of Governors of the Federal Reserve System is required to control the rate of interest which may be paid by member banks on time and savings deposits. No member bank may pay interest on a savings deposit at any time before its maturity, except upon such conditions and in accordance with such rules and regulations as may be prescribed by the Board. In case the state banks should have greater restrictions placed upon them by state regulatory bodies, it is provided that the rate paid on deposits by any national bank shall not exceed the maximum rate paid by the state banks of that area.

Definitions of classes of deposits. — For purposes of enforcement of the various provisions of the Federal Reserve Act which have been mentioned, the Federal Reserve Board issued regulations in which various definitions are given. Regulation Q, series of 1933, states in part that demand deposits within the meaning of this act shall comprise all deposits payable within thirty days, and time deposits shall comprise all deposits payable after thirty days. Savings deposits, time certificates of deposits, postal savings deposits are, therefore, included in the general term, time deposits.

Regulation of insured nonmember banks. — In general, the authority of federal law does not extend to state banks unless they are members of the Federal Reserve System. The establishment of the Federal Deposit Insurance Corporation, however, gave this federal body a great measure of control over a large majority of the state banks, not members of the Federal Reserve System. An amendment to the Federal Reserve Act (Paragraph 8, subsection V of Section 12b) gave the Federal Deposit Insurance Corporation authority to prohibit the payment of interest on demand deposits by the insured nonmember banks and to regulate the rates of interest that they shall pay on their time and savings deposits.

Effects of regulation of interest on deposits. — Under the authority granted the Board of Governors of the Federal Reserve System and the Board of Directors of the Federal Deposit Insurance Corporation, these agencies have published from time to time the maximum rates of interest payable on each class of deposits. This regulation has been cordially received by bankers in general for

it eliminated the competition among banks which had previously tended to increase the interest paid on deposits. The elimination of interest payments on demand deposits and the reduced payments on time and savings deposits have encouraged the placing of bank funds in investments of lower yields, although this outcome has hardly been fully tested as yet. Since banks are no longer required to pay interest on balances left by the Treasury, until needed and withdrawn, the banks have an added inducement to enter subscriptions for the new offerings of government securities. A further effect of these regulations is to reduce the risks taken by the Federal Deposit Insurance Corporation on its insurance of deposits, provided the banks follow the incentive to put their funds into safer, lower-yield assets.

THE VOLUME OF DEPOSIT CREDIT

The factors of change in the volume of deposit credit are important elements in the business situation because deposit currency is used in greater volume than any other means of payment. The student of monetary and banking phenomena should, therefore, become acquainted with the data on the use of deposit credit or currency, and the significance of these data which reveal changes in the rate of turnover of bank deposits.

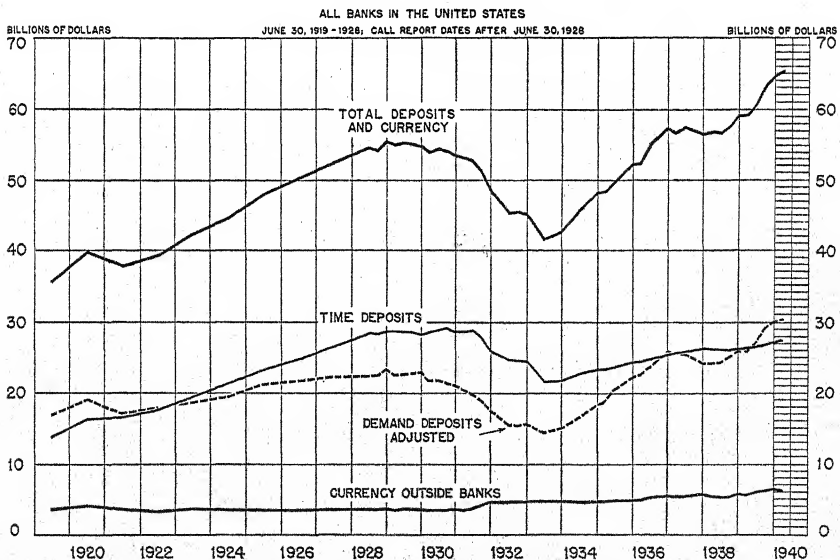
Factors of increase in bank deposits. — A convenient summary of some of the factors that may, during any period, cause an increase in member-bank deposits, excluding government deposits, for the account of the general public and of nonmember banks and foreign banks, follows:

- ✓ 1. An increase in monetary gold stock, unless subjected to a sterilization process by the government.
- ✓ 2. An increase in Treasury expenditures of funds derived from
 - a. The purchase of direct obligations of the United States Government by banks.
 - b. The purchase of fully guaranteed obligations of the United States Government by banks.
 - c. The withdrawal by the Treasury of its deposits with the Federal Reserve and member banks.
 - d. The sale of securities to the Postal Savings System in return for funds withdrawn from member banks.
- ✓ 3. An increase in loans by member banks to their customers.

4. An increase in investments other than government securities.
5. An increase in deposits of foreign banks.
6. An excess of deposits of domestic banks over balances due from domestic banks (principally balances due to nonmember banks).
7. An increase in Treasury currency outstanding, such as silver certificates.
8. A decrease in money in circulation outside banks.

If any of the first seven of the above items are changed from the status of an increase to that of a decrease and if the eighth item is changed from a decrease to an increase, the net result would be a lessening of the influence of the factors leading to an increase in bank deposits. An explanation of the factors enumerated above, in so far as they affect the operations of the Federal Reserve banks and the Treasury, is made in Chapters XXVII and XXVIII.

CHART I. TOTAL DEPOSITS AND CURRENCY



Source: *Chart Book of the Board of Governors of the Federal Reserve System.*

The effect of government financing on bank deposits. — One of the most important elements in the creation of deposit credit in recent years has been the deficit financing of the federal government. Briefly, the process by which the government creates deposit credit is as follows. The Treasury announces a bond issue and the

TABLE 10. DEPOSITS OF ALL MEMBER BANKS ON
DECEMBER 31, 1928-1939

(In millions of dollars)

	1928	1929	1930	1931	1932	1933 †	1934	1935	1936	1937	1938	1939
<i>Demand deposits</i>												
Interbank — domestic.....	3,649	3,517	3,873	2,832	3,609	3,139	4,569	5,696	6,402	5,436	6,510	8,243
Interbank — foreign.....	535	544	547	398	243	129	147	444	432	453	511	757
United States Government.....	262	143	267	412	475	967	1,636	844	882	781	790	743
Public funds.....	1,300	1,335	1,362	1,303	1,119	1,320	1,799	2,139	2,329	2,132	2,386	2,321
Certified checks, etc.....	2,264	1,681	1,294	797	422	378	838	882	881	767	547	563
Individuals, corporations, etc.....	17,604	17,526	16,139	13,632	12,273	12,109	14,951	18,035	20,970	19,747	21,119	24,604
Demand deposits — adjusted *.....	16,503	16,647	15,869	13,658	12,691	12,674	15,686	18,801	21,647	20,387	22,293	25,118
<i>Time deposits</i>												
Interbank — domestic.....	124	95	107	63	87	83	134	151	153	129	132	142
Interbank — foreign.....	—	154	238	26	1	7	7	5	6	11	—	—
Postal savings.....	134	122	189	463	708	778	452	218	104	95	61	51
Public funds.....	418	595	599	388	342	301	294	361	296	482	462	418
Individuals, corporations, etc.....	12,776	12,267	12,593	10,377	9,410	7,957	9,020	9,680	10,429	10,806	10,846	11,104

Source: *Annual Report of the Board of Governors of the Federal Reserve System*, 1936, pp. 138-139, and *Federal Reserve Bulletins*, 1937-1939.

* Demand deposits other than interbank and United States Government less cash items reported as in process of collection and prior to December 31, 1935, less cash items reported on hand but not in process of collection.

† Beginning June 1933, figures relate to licensed banks only.

commercial banks subscribe to it. The government receives deposit credit at the purchasing banks to the extent of the proceeds of the bond sales. The government, then, draws against these deposit credits (perhaps having transferred the credits to the Federal Reserve banks before doing so) in favor of individuals and firms with whom the government has made commitments. These individuals and firms deposit the checks with banks, thereby increasing bank deposits.

Government expenditures, together with gold imports, were undoubtedly the chief elements in the tremendous increase in the volume of bank deposits from 1933 to 1939. The creation of deposit credit by means of government indebtedness is not limited to the federal government. In the 1920's it was estimated that states, municipalities, school districts, and other subdivisions of government, went into debt at the rate of about a billion dollars per year. Deposit credit was created when banks purchased bonds from these branches of government and they, in turn, expended the funds received from the sale of their obligations. When business firms obtain bank loans, the loans and discounts of banks are increased as deposits are increased; when banks purchase bonds, their holdings of long-term assets are increased as deposits are increased.

The effect of gold imports on bank deposits. — In the year and a half ending with December 30, 1939, when the influence of hostilities in Europe was strongly felt, the United States acquired \$4,500,000,000 of gold, an amount larger than the dollar value of the entire gold stock of this country at the end of 1933. These gold imports of 1939, together with the increase in bank loans and investments, brought bank deposits to the highest level in the history of the United States. The largest increases in deposits were in the banks of New York City, because these banks received most of the deposits from abroad. In addition to the capital inflow from abroad, the great increase in our export surplus during the last four months of 1939 contributed to the inflow of gold and the increase of bank deposits. Increased domestic production of gold has, of course, had the same effect on bank deposits as increased imports of newly-mined or old gold. (Silver purchases by the federal government also contributed to the increase in bank deposits.)

Factors of decrease in bank deposits. — Deposits of all banks continued to increase in 1936, although the increase over the pre-

vious year was not proportionally as great as it was in 1935. A considerable upturn in business activity, as well as a continuation of huge government expenditures, accounts in large part for this *increase*. Table 10 shows changes in the types of deposits during these and other years. In 1937, however, deposits began to fall as business activity *declined* and government activities exerted a less strong force in the direction of expansion.

In commenting upon the decline in deposits in 1937, the *Federal Reserve Bulletin* for December of the same year says:

The decrease in demand deposits this year represents in part a decline in the amount of funds available for active use, while the increase in time deposits is an indication of a further growth in savings. Some of the decrease in demand deposits reflects the purchase by investors of securities sold by banks. It appears, however, that a part of the decline in demand deposits and of the growth of time deposits represents a shifting of deposits at the instance of the depository banks in order to reduce required reserves.

The *Bulletin* continues with a discussion of the decline in member-bank loans and investments during the same year.

Thus the year 1937 furnishes a record of declining deposits, which are attributable chiefly to

1. A decline in the excess of payments made by the government over its collections through taxes, the operation of the social security program, etc.
2. A decline in bank loans.
3. A decline in investment holdings of banks.
4. A decline in business activity.
5. An increase in money in circulation.

INSURANCE OF BANK DEPOSITS

State plans. — In the earlier periods of the banking history of the United States, emphasis was placed on the note issue. This emphasis changed, as a larger and larger percentage of bank operations involved the receipt and creation of deposits. It was to be expected, therefore, that as great a demand for the protection of depositors should arise in the later periods as that which was felt for the protection of noteholders in the earlier periods. One early attempt to protect depositors was the "safety fund" plan which

was intended to protect both notes and deposits, and which was adopted by the State of New York in 1829.

After the failure of the safety fund plan, no state attempted a guaranty of deposits system until December 1907, when the legislature of the then new State of Oklahoma passed the bank-guaranty law, just a month and a day after the Indian Territory became a state. The demand for deposit guaranty grew out of the experiences of depositors during periods of depression when they lost heavily, largely because the banks had become enmeshed in various forms of speculation preceding the depression years. The Panic of 1907 created an insistent demand in many states that something be done to protect depositors against loss from bank failures. The Oklahoma guaranty law went into effect in February 1908. Soon laws having a similar purpose were enacted by Kansas (1909), Nebraska (1909), Texas (1909), Mississippi (1914), South Dakota (1915), and North Dakota and Washington (1917).

These state plans differed in several respects. One system required all state banks to make regular contributions to a state fund and to pay special assessments, if necessary. This is called the Oklahoma plan. Another plan permitted the establishment of voluntary state-supervised associations of banks. In each case the association paid the depositors of any closed member bank from a fund built up by its members. One of the Kansas plans followed this procedure. The Kansas Bankers' Deposit Guaranty and Surety Company was an example of an association formed for the mutual guaranteeing of deposits without state supervision. According to still another plan, an insurance or casualty company insured the depositors of the banks against loss.

The Oklahoma Plan. — Since the Oklahoma plan called for immediate payments to depositors of defaulting banks, a fund was to be built up to meet the contingency of bank failures. Assessments were levied against all state banks and trust companies to the extent of 1 per cent of their average daily deposits. If this fund should become depleted, special assessments without definite limits were to be made. The state banking board was authorized to handle the fund and to have general supervision over the state banks. Upon the default of a bank, the state bank commissioner took charge to determine whether or not it was solvent. If insolvent, he would liquidate it, paying the proceeds of the liquidation into the fund.

If the fund should be inadequate, certificates of indebtedness were issued to the unsatisfied depositors, or were sold to investors; the proceeds of such sales were used to pay depositors.

Several amendments to the original law were adopted from time to time. The most important of these were: (1) In 1909, the fund was fixed at 5 per cent of the average daily deposits and the annual assessment was fixed at $\frac{1}{2}$ of 1 per cent of average daily deposits; and (2) in 1916, extra assessments were abolished.

During the first three years of its existence, the plan was very popular, judging by the increase in the number of state banks that were organized in the state during those years. National banks which were denied the right to join by opinion of the Attorney General of the United States, declined in number during the same years. In 1911 and 1912 a number of banks failed, largely because of the crop failure in the former year which increased the extra assessments to such an extent that about 250 state banks decided to escape from the system by taking out charters to operate as national banks.

The second wave of bank failures ten years later, 1921-1922, resulted in the complete breakdown of the Oklahoma guaranty of deposits system. The law was repealed by the legislature in March 1923.

The Kansas Plan. — Some of the most important characteristics of the deposit-guaranty law enacted by the legislature of Kansas in 1909 were as follows: (1) Before admitting a bank to the system, a thorough examination of it must have been made by the State Bank Commissioner. (2) Member banks had to be at least one year old and must have accumulated a paid-up and unimpaired surplus of 10 per cent. (3) Members had to deposit \$500 in cash or in national, state, or municipal bonds for every \$100,000 of deposits. (4) Annual assessments were fixed at $\frac{1}{20}$ of 1 per cent of the average daily deposits, less capital and surplus. (This provision encouraged banks to build up their capital funds through the accumulation of surplus or by other methods.) (5) Annual assessments continued until the fund reached \$500,000; then they ceased. (6) Special assessments of $\frac{1}{20}$ of 1 per cent, but not more than five such assessments could be made in any one year to replenish the fund if necessary. (7) Deposits of banks were limited to ten times their capital. (8) The rate of interest on guaranteed deposits was

limited. (9) The Bank Commissioner had power to remove incompetent or dishonest bank officials and to force the banks to correct abuses within thirty days. (10) Any bank could withdraw from the system at any time but had to pay its quota of assessments to cover losses during a period of six months after its withdrawal.

The deposit guaranty of national banks in Kansas. — Since 694 out of a total of 1,107 state banks in Kansas entered the guaranty of deposits system, the national banks were practically forced to meet the competition in some other manner. This was done through the Kansas Bankers' Deposit Guaranty and Surety Company which was organized in 1909. This company was capitalized at \$500,000 and was owned by officers of national banks and some state banks that did not join the Kansas state system. This company guaranteed deposits for a premium of 50 cents for each \$1,000 of deposits up to the amount of the capital stock and surplus of the bank which paid the premium. If the deposits of a bank exceeded its capital stock and surplus, it would pay \$1 per \$1,000 of deposits above that amount. Many of the banks that took out these policies allowed them to lapse over a period of years when no national bank failure occurred. The Kansas Bankers' Deposit Guaranty and Surety Company then turned to other lines of business than that of guaranteeing bank deposits.

The failure of other state plans. — The numerous bank failures in those states where deposit-guaranty systems were established resulted in the breakdown of all of them. The distressed condition of agriculture which persisted for several years after the crash of land prices was the general cause of these bank failures. Inadequate supervision was another contributing factor. Most of the bank failures occurred after the industrial sections had regained a considerable measure of prosperity. The indebtedness against the fund in North Dakota was so large that it could hardly pay the interest on its indebtedness with the maximum assessments under the guaranty law. The amendment to the law passed by the state legislature failed to save the system and it was abandoned in 1929. The South Dakota system suffered a similar fate and was virtually abandoned in 1927. The Washington plan failed with the collapse of one large bank. The Nebraska system failed in 1930, although a final settlement fund sought to pay off some of its indebtedness after that date.

The temporary plan of federal deposit insurance. — Despite the complete failure of the state plans for guaranteeing deposits, the demand for some kind of protection for depositors continued. This popular demand resulted in a revival of deposit guaranty as a political issue in those states where it had failed and it spread to the nation as a whole during the depression period following the stock-market crash of 1929. It was contended by the proponents of deposit guaranty that a nation-wide system would succeed because the risks would not be so greatly concentrated. One of the chief weaknesses of the state system would, therefore, not exist in a federal system. Furthermore, a nation-wide system would eliminate the competition of state and national banks and the competition between the banks of the different states. In 1932, numerous bills were introduced in the House of Representatives in Washington which were planned to set up a deposit-guaranty system for the whole nation.

The Steagall amendment to the Glass bill of 1933 received the support of a large majority in both houses of Congress. By this amendment, deposit insurance became a feature of the Banking Act of 1933. In accordance with this act, the Federal Deposit Insurance Corporation was organized on September 11, 1933. Section 8 of the Banking Act of 1933, which was incorporated as section 12B of the Federal Reserve Act, provided for a Temporary Federal Deposit Insurance Fund to become effective on January 1, 1934.

The permanent plan of Federal Deposit Insurance. — Under an act of Congress of June 16, 1934, the temporary plan was extended to June 30, 1935, and provision was made to insure each depositor during this period up to \$5,000. By joint resolution of Congress of June 28, 1935, a further extension to August 31, 1935, was made. Before the expiration of this period the Banking Act of 1935 was passed, which set up the permanent plan of deposit insurance, which, on August 23 of that year, superseded the temporary plan of insurance.

The capital stock of the Federal Deposit Insurance Corporation is held by the United States Treasury and the Federal Reserve banks. Under the act which established the Corporation, the Secretary of the Treasury was directed to subscribe to the extent of \$150,000,000 and each Federal Reserve bank was required to subscribe for an

amount equal to one-half its surplus on January 1, 1933. In this manner the capital stock account of the Corporation was fixed at \$289,299,556.99. This stock has no voting privilege and contains no provisions for dividends. The Corporation is also authorized to issue debentures in an amount aggregating not more than three times the sum of its paid-in capital stock plus the amount received as assessments from insured banks during 1936.

The Corporation is managed by a board of three members. One of these is the Comptroller of the Currency; the other two are appointed by the President with the advice and consent of the Senate. Their term of office is six years. The extent of the powers of this board is indicated by the functions of the Corporation which are described in succeeding paragraphs.

A few of the most important provisions ¹ of the legislation of 1935 relating to deposit insurance are as follows:

1. In lieu of previous provisions, under which there would have been insured 100 per cent of deposits up to \$10,000, 75 per cent of deposits between \$10,000 and \$50,000, and 50 per cent of deposits above \$50,000, *the Act of 1935 provided that \$5,000 shall be the maximum amount insured for one depositor*, conforming in this respect to the amount of deposits insured under the temporary plan existing at the time of the enactment of the Banking Act of 1935.

2. In lieu of the assessments aggregating not more than 1 per cent of insured deposits, to which the banks insured under the temporary insurance plan were subject, and in lieu of the requirement that banks, which were to be insured under the permanent plan, purchase stock in the Federal Deposit Insurance Corporation and then be liable for unlimited assessments, insured banks under the plan set up in the Act of 1935 are subject to an annual assessment of $\frac{1}{12}$ of 1 per cent of their average deposits payable semiannually.

3. A separate insurance fund for mutual savings banks may be established by the Corporation and for such separate fund a lower rate of assessment may be provided.

4. The Federal Deposit Insurance Corporation was directed to prohibit by regulation the payment of interest on demand deposits by insured nonmember banks and to limit by regulation the rates of interest which they may pay on time and savings deposits.

¹ *Annual Report of the Board of Governors of the Federal Reserve System*, 1935, pp. 49-51.

5. The insured status of a bank is terminated when it ceases to be a member bank; but for two years thereafter the bank remains liable for assessments and retains the insurance on insured deposits held by it when it ceased to be a member bank.

Functions of the Federal Deposit Insurance Corporation. — In its annual report for 1936, the Federal Deposit Insurance Corporation has classified its functions in the following discussion of its activities and powers:

The activities of the Federal Deposit Insurance Corporation center upon three major functions: (1) payment of insured deposits in suspended insured banks; (2) liquidation of insured banks placed in receivership; and (3) development and maintenance of a sound banking situation.

The prompt payment of depositors in suspended insured banks and the efficient liquidation of these banks are important tasks, but the most vital responsibility placed by Congress upon the Corporation is the maintenance of a banking condition such that the public is adequately served and few failures occur. However, the responsibility for maintaining a sound banking situation is shared with other Federal and State agencies, and the powers of the Corporation are limited.

The powers of the Federal Deposit Insurance Corporation designed to aid in maintaining a sound banking situation are as follows:

- (1) To pass on applications for admission to insurance;
- (2) To pass on applications from insured State banks not members of the Federal Reserve System to open or relocate branches or to retire capital obligations;
- (3) To pass on proposals for the release of restricted deposits in insured banks, and on proposals for the assumption of deposit liabilities of noninsured banks by insured banks, or of those of insured banks by noninsured banks;
- (4) To examine insured banks and to review reports of examinations made by the Comptroller of the Currency and the Board of Governors of the Federal Reserve System;
- (5) To give notice to other bank supervisory authorities of the existence of unsafe or unsound banking practices, as of violations of law or regulations, by any insured bank, and to terminate the insurance of a bank which continues such practices or violations of law or regulations;
- (6) To make loans to banks, purchase assets from banks, or guarantee against loss an insured bank which assumes the deposit liabilities of another insured bank, when such loan, purchases or guarantee will reduce the estimated loss to the Corporation and will facilitate a merger or consolidation;
- (7) To require reports of condition from insured banks not members of the Federal Reserve System, and to require publication of such reports; and
- (8) To issue regulations necessary to the proper fulfillment of the Federal deposit insurance law.²

² *Annual Report of the Federal Deposit Insurance Corporation*, 1936, pp. 7-8.

Policies of the Federal Deposit Insurance Corporation. — In order to carry out its functions, as outlined above, it has been necessary for the Federal Deposit Insurance Corporation to develop methods by which it identifies unsafe and unsound banking practices. In its report for 1937,³ these policies are stated and may be summarized as follows:

The maintenance of a sound banking structure requires that (a) the individual banks should be adequately capitalized; (b) they should not acquire or accumulate hazardous or substandard assets or extend credits involving excessive or undue concentration of risks; (c) they should be able to earn reasonable profits; and (d) their management should be competent and responsible.

Policy regarding capital of insured banks. — Adequate capital is one of the most important requisites for the maintenance of a sound bank. The Corporation believes that each bank should have a sound capital sufficient, having due regard for the quality and the character of the assets held, to give reasonable assurance of the maintenance of a margin of protection to depositors and other creditors. A minimum of 10 per cent of total liabilities and, in addition, a sound capital sufficient to assure the proper discharge of other responsibilities and functions of the bank is used as a working rule in the consideration of cases coming before the Corporation for action.

This statement of policy continues with an assertion to the effect that an insured bank is being subsidized in part by other banks of the deposit insurance system when it operates with too small a margin of profit. In addition to this consideration, the depositors who obtain little or no return on their funds, unknowingly assume an undue risk when the owners fail to provide adequate capital for the enterprise.

Quality of assets. — There are no set rules which can be established in this regard. Certain general principles, however, are advocated by the Corporation and are endorsed by most bankers. A bank should maintain a balance among different types of assets in accordance with the demands which it may expect to meet. A bank should not purchase securities or make loans involving excessive risk of loss. Investment in bank premises and equipment should bear a reasonable relation to the needs of the business. Holdings of other real estate should be kept at a minimum and when taken over in satisfaction of a debt should be disposed of at the earliest favorable opportunity.

Policy regarding bank loans. — Examiners of the Corporation are instructed not to criticize an individual loan on the basis of the time of its probable repayment but solely on the basis of the probable ability of the debtor to keep his obligations current and sound. Examiners are instructed to criticize a loan because of lack

³ *Annual Report of the Federal Deposit Insurance Corporation, 1937*, pp. 14-17.

of credit information regarding the borrower, because the loan is made for speculative purposes, involving undue risk of loss, because the loan represents an over extension of credit or undue concentration for the bank in a single line, because the loan involves improper assumption of management risks by the bank, or because the loan is illegal.

Policy regarding securities. — Only high grade bonds should be purchased. They should be purchased for investment with the expectation of holding them until maturity. Securities should not be purchased with the intention of selling at a profit. Developments in the securities market during 1937 have demonstrated the soundness of the Corporation's opposition to trading which was expressed in the Corporation's *Annual Report for the year ending December 31, 1936*, as follows: The banks constitute one of the most important groups of investors in the bond market. As a group they cannot get in and out of the investment market without completely disrupting that market. As a consequence they cannot speculate in securities without undermining the soundness of the financial structure of the entire country. . . . Profits from transactions in securities should not be used for dividends. Such profits should be placed in a special valuation account to be used to offset losses.

*Action on unsafe and unsound practices and violations of law and regulations.*⁴ — From August 23, 1935, to December 31, 1939, the Federal Deposit Insurance Corporation initiated proceedings against seventy-nine insured banks for engaging in unsound practices and violations of law or regulations. The insured status of three of these banks was terminated. Corrections were obtained and proceedings discontinued in the case of thirteen banks, while fifty-one ceased operations, either through suspension or through merger with, or succession by, other banks. The banks which were cited by the corporation for unsafe or unsound practices engaged in many such practices and continued them despite repeated criticisms in successive examinations.

The loan powers of the Federal Deposit Insurance Corporation.⁵ — From August 23, 1935, to July 1, 1938,⁶ the Federal Deposit Insurance Corporation was

. . . authorized to make loans secured by the assets of insured banks or to purchase the assets of such banks provided: first, the action will reduce the risk or avert a threatened loss to the Corporation; and second, it will facilitate the absorption of an insolvent or weak bank by another bank. These powers enable the Corporation to eliminate insolvent banks with the minimum of loss to itself and with the least disturbance to the communities in which they are located.

⁴ *Annual Report of the Federal Deposit Insurance Corporation*, 1939, pp. 25-26.

⁵ See *Annual Report of the Federal Deposit Insurance Corporation*, 1937, pp. 10-12.

⁶ By action of Congress the July 1, 1938, limitation was removed.

According to the annual report for 1939, one hundred and five insolvent or hazardous banks with about 575,000 depositors and total deposits of \$214,500,000 were absorbed by other insured banks with the financial aid of the corporation.

Suspensions, receiverships, and mergers. — The Federal Deposit Insurance Corporation regards its activities in the direction of promoting sound banking practices to be its most important function. It also regards the suspensions, receiverships, and mergers which have taken place to be a step in the direction of better banking for the nation as a whole. The reasoning back of this position is that depositors of sound banks hearing about the losses of depositors in weak banks would, in the absence of a system of deposit insurance, start runs on the sound banks. Hence, payments to the depositors of failed banks promote normal, profitable banking operations for all banks.

According to its 1939 report, the corporation made payments to depositors in 207 banks placed in receivership with total deposits of \$80,100,000. Of the 300,000 depositors in these banks only $\frac{1}{2}$ of 1 per cent had accounts in excess of \$5,000 which were not fully protected. The deposits not protected amounted to 10 per cent of total deposits. The corporation paid the remaining 90 per cent of deposits with remarkable promptness. In many cases the insured deposits were available within from four to ten days after the closing of the bank.

An appraisal of Federal Deposit Insurance. — The criticism of deposit insurance which is heard most frequently is that it puts all banks and bankers on the same level, making the deposits in weak banks with poor management as safe as deposits in older, more conservative, better-managed banks. This argument continues with the assertion that banks with more experienced and more competent management are taxed to support banks with inexperienced, reckless, and incompetent management. Furthermore, the public becomes indifferent to reckless and dishonest banking and the prospective depositor, under a system of deposit insurance, does not investigate the relative merits of different banks with which he might deposit his funds.

The proponents of deposit insurance meet this argument with the following answers: (1) the older, more experienced bankers are not always conservative; (2) the argument largely ignores the public

character of banking; and (3) there are ways of weakening the force of the argument. These points are worthy of careful analysis.

The history of banking in the United States during the past twenty years reveals that many small country banks have been very reckless at times in granting loans that fostered and supported land and other real estate booms. The seemingly invariable result was widespread loss to speculators in land and other real estate, and widespread suffering on the part of people who placed their savings in banks that failed because of the support which those banks gave to the various speculative extravagances. At other times, large banks with supposedly conservative, competent, and experienced management rendered support through a large volume of security loans to a disastrous speculation in securities. They also supported ventures in urban real estate finance which finally resulted in the failure of several large banks. In other words, the management of the older and larger banks cannot be given a "clean bill of health" relating to conservative banking, although their depositors may not have suffered losses so great in the aggregate as in the newer and smaller banks.

It must be admitted that there is hardly a field of corporate activity so "affected with a public interest" as banking. Any argument that presents a purely individualistic or atomistic interpretation of the banking process is probably, in large measure, a false interpretation. Widespread bank failures, whatever their cause or causes, sometimes precipitate panics which halt the normal functioning of our whole economic system. If nation-wide deposit insurance can help to promote stability in the functioning of our whole banking system, it may be worth the price paid for it by the banks which are strong enough to survive the most severe panic. In a period of widespread bank failures these strongest banks might suffer greater losses than the amount of the premiums they pay to support the weaker banks under a system of deposit insurance.

The main consideration relating to the promotion of stability in our banking system centers around the efforts of the managers of the system to encourage and enforce sounder banking policies and practices. The efforts of the Board of Directors of the Federal Deposit Insurance Corporation to promote a more conservative loan and investment policy on the part of the insured banks and to improve the capital position of those banks are steps in the right

TABLE 11. PER CENT OF DEPOSITS PROTECTED IN
CLOSED INSURED BANKS AND INSURED IN OPERAT-
ING INSURED BANKS, DECEMBER 31, 1939

(Banks Grouped by Amount of Deposits)

	<i>Deposits protected in all closed banks *</i>	<i>Deposits protected in banks placed in receivership †</i>	<i>Deposits insured in operating banks **</i>
<i>All banks</i>	97.1%	89.5%	45.9%
<i>Banks with deposits of —</i>			
\$100,000 or less.....	97.0	96.1	95.2
\$100,000 to \$250,000.....	96.3	95.1	91.5
\$250,000 to \$500,000.....	96.1	94.1	87.8
\$500,000 to \$1,000,000.....	92.5	85.8	84.0
\$1,000,000 to \$2,000,000.....	97.7	93.3	79.9
\$2,000,000 to \$5,000,000.....	96.5	84.6	74.2
\$5,000,000 to \$10,000,000.....	100.0	.....	66.8
\$10,000,000 to \$50,000,000.....	97.5	86.4	51.1
More than \$50,000,000.....	.....	.....	28.2

Source: *Annual Report of the Federal Deposit Insurance Corporation*, 1939, p. 20.

* Deposits protected in banks placed in receivership and all deposits in banks merged with financial aid of the Corporation, 1934-1939.

† Protected by insurance, security, offsetting claims, priority over claims of other depositors, 1934-1939.

** Estimated to be covered by insurance on September 21, 1938.

direction. The removal of interest payments on demand deposits and the regulation of the rates they should pay on time deposits, whereby the intense competition among banks for deposits has been lessened, are other moves toward sounder banking. In view of these regulations and these policies, it can hardly be said, thus far at least, that federal deposit insurance has encouraged recklessness and incompetence in banking practices and in bank administration. If in the future banks generally should become enmeshed in inordinate speculation, it will most likely be in a period when the business world has taken the lead in this direction. In other words, unsound banking is not the sole cause of the dangerous developments in the business world that lead to distress. The most that can reasonably be expected of bankers and those persons in control of

credit is that they use their power and influence in such manner that individual and central banks do not encourage and support speculative excesses.

One of the criticisms of the Federal Deposit Insurance Corporation as it now operates is that the insurance is applied only to deposits up to a maximum of \$5,000, whereas the base of assessments is the entire amount of deposits. The base of assessments is, therefore, not in harmony with the coverage supplied. Since very few deposits in the small banks are greater than \$5,000, the criticism originates with the depositors and officials of the large banks. Approximately 97 per cent of the deposits in closed insured banks were protected by insurance, offsetting claims, pledge of assets, priority over other depositors, or through advances by the corporation to facilitate mergers. Table 11 reveals the percentage of deposits protected in closed insured banks and in operating insured banks, with the banks classified according to the amount of deposits. Table 11 also shows that only 28.2 per cent of the deposits of banks with total deposits over \$50,000,000 are covered by insurance, yet these banks are assessed for insurance on the basis of their total deposits.

The Federal Deposit Insurance Corporation faces a dilemma concerning the extent to which deposits should be insured. If deposits are fully insured, the failure of a few very large banks might deplete its reserves. On the other hand, the realization on the part of large depositors that their deposits are not fully covered might cause them in a time of financial uncertainty, to withdraw their deposits. The result of such withdrawals might be a factor which would accentuate a condition of panic and adversely affect the small banks. In any event, it would seem desirable that the capital position of many banks be improved before 100 per cent insurance coverage is provided.

The financial position of the Federal Deposit Insurance Corporation. — The Federal Deposit Insurance Corporation is intended to maintain the depositors' confidence and to protect the whole economy against general liquidation caused by runs on banks. If this purpose is to be accomplished, the corporation itself must, of course, possess the confidence of the entire nation. It must have an income sufficient to meet its losses averaged over a long period of time. This means that its operating statement should not be judged

solely in the light of a short period most favorable to its successful operation.

The Corporation has recognized this factor by calling attention in its reports that it came into existence immediately following a banking crisis and that a large number of the weaker banks had already been eliminated from our banking system. The first six years of its operations, therefore, may give no indication of the losses it might encounter in the future.

TABLE 12. INCOME AND EXPENSES OF THE FEDERAL DEPOSIT INSURANCE CORPORATION SINCE BEGINNING OPERATIONS*

(In millions of dollars)

	Total	1939	1938	1937	1936	1935	1933-34†
Income— total	218.6	51.2	47.8	48.1	43.8	20.7	7.0
Deposit insurance assessments**	164.9	40.7	38.3	38.8	35.6	11.5	.....
Investment income and profits	53.7	10.5	9.4	9.3	8.2	9.3	7.0
Expenses — total	55.2	20.7	10.8	7.4	6.1	5.7	4.5
Deposit insurance losses and expenses	36.7	17.4	7.8	4.7	3.6	3.0	0.3
Administrative expenses††	18.5	3.4	3.0	2.7	2.5	2.7	†4.2
Net income added to surplus	163.4	30.4	37.0	40.7	37.7	15.1	2.5

Source: *Annual Report of the Federal Deposit Insurance Corporation*, 1939, p. 35.

* Figures of total expenses, deposit insurance losses and expenses, and net income added to surplus for years prior to 1939 differ from those shown in previous Annual Reports because of revisions in estimates of losses allocated to the different years.

† Includes expenses from date of organization, September 11, 1933, to December 31, 1934.

** Assessments collected from insured banks, members of the temporary insurance funds, were credited to their accounts in total at the termination of the temporary funds, being applied toward subsequent assessments under the permanent insurance fund, and resulting in no income to the Corporation from assessments for the term of the temporary insurance funds.

†† Includes furniture, fixtures, and equipment purchased and charged off.

‡ After deducting portion of expenses and losses charged to banks withdrawing from the temporary funds on June 30, 1934.

NOTE: Figures do not balance precisely because of rounding.

The operating statement. — Table 12 reveals the income and expenses of the Federal Deposit Insurance Corporation since its inception. Although its net income added to surplus has enabled it to build up its surplus account to higher levels each year, the rate of growth has not been continuous. In 1939 the amount of net income

TABLE 13. COMPARATIVE BALANCE SHEET OF THE
FEDERAL DEPOSIT INSURANCE CORPORATION,
DECEMBER 31, 1939, AND DECEMBER 31, 1938

	1939	1938
<i>Assets</i>		
Assets acquired through bank suspensions and mergers:		
Subrogated claims of depositors against closed insured banks.....	\$ 38,798,794.90	\$ 18,825,799.24
Net balances of depositors in closed insured banks pending settlement or not claimed, to be subrogated when paid — contra.....	2,796,026.59	909,151.21
Loans to merging banks to avert deposit insurance losses.....	57,366,066.44	26,613,183.29
Assets purchased from merging banks and receivers of closed insured banks to avert deposit insurance losses.....	802,991.62	851,490.58
	\$ 99,763,879.55	\$ 47,199,624.32
Less: Reserve for losses.....	35,533,139.86	20,649,547.76
	\$ 64,230,739.69	\$ 26,550,076.56
Cash on hand and on deposit.....	28,276,433.37	22,230,284.28
United States Government securities (cost less reserve for amortization of premiums) and accrued interest receivable.....	363,542,301.83	372,758,341.10
Furniture, fixtures, and equipment.....	1.00	1.00
Deferred charges and miscellaneous assets....	64,251.66	83,623.94
Total assets.....	\$456,113,727.55	\$421,622,326.88
<i>Liabilities</i>		
Current liabilities:		
Accounts and assessment rebates payable.....	\$ 289,113.00	\$ 77,452.12
Net balances of depositors in closed insured banks pending settlement or not claimed — contra.....	2,796,026.59	909,151.21
Earnest money deposits and unapplied collections applicable to loans to merging banks and assets purchased.....	209,678.02	8,245.01
Unused credits for assessments paid to temporary Federal Deposit Insurance funds and prepaid assessments.....	2,583.76	41,456.50
Reserve for administrative and deposit insurance expenses.....	105,604.16	41,504.38
Total liabilities.....	\$ 3,403,005.53	\$ 1,077,809.22
<i>Capital</i>		
Capital stock:		
United States.....	\$150,000,000.00	\$150,000,000.00
Federal Reserve banks.....	139,299,556.99	139,299,556.99
	\$289,299,556.99	\$289,299,556.99
Surplus — (see Table 11).....	163,411,165.03	131,244,960.67
Total capital.....	\$452,710,722.02	\$420,544,517.66
Total liabilities and capital.....	\$456,113,727.55	\$421,622,326.88

Source: *Annual Report of the Federal Deposit Insurance Corporation*, 1939, p. 40.

added to surplus was lower than in any of the previous three years. The Corporation has called attention to this fact in the following words, "The present rate of assessment assumes that improvements in the structure and operation of the banking system and in standards of supervision will be successful in keeping losses substantially lower in the future than they have been in the past."⁷

The financial statement. — The rate of growth in the assets and the surplus of the Corporation is revealed by the comparative balance sheet for December 31, 1938, and December 31, 1939, presented in Table 13.

In a financial report released on July 29, 1940, Mr. Leo T. Crowley, Chairman of the Board of Directors of the Federal Deposit Insurance Corporation, indicated the willingness of the Board to consider a reduction in the rate of assessment paid by insured banks. The willingness of the Board to recommend such action seems, however, to depend upon the degree and effectiveness of its supervisory powers. One of several statements issued by the Board which indicates this attitude follows:

It now appears that the capital of the Corporation will have increased to about \$500 million by the end of 1940. This amount will have accumulated sooner than was expected since income has been in excess of that contemplated at the time of the passage of the Banking Act of 1935. We believe, therefore, that it would be appropriate to give consideration to a reasonable reduction in the rate of assessment paid by banks. The continued success of the Corporation is more dependent upon its possession of adequate supervisory powers than it is on annual revenue. Inadequate supervision of banks would require a charge considerably greater than the present assessment. We believe, however, that the banking system will become increasingly stronger with the existence of Federal deposit insurance to stabilize the demands on banks and to serve as an instrumentality for the development and maintenance of an adequate and uniform bank supervision, provided there continues to be reasonable cooperation on the part of other supervisory agencies and bank management.⁸

SUGGESTIONS FOR FURTHER READING

Association of Reserve City Bankers, Bulletin No. 3. *The Guaranty of Bank Deposits.* Chicago, 1933.

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Foster, M. B. and Rodgers, R. *Money and Banking.* New York, 1940, Chapter X.

⁷ *Annual Report of the Federal Insurance Deposit Corporation, 1939, p. 10.*

⁸ *Report of the Federal Deposit Insurance Corporation, June 30, 1940, p. 4.*

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- Keynes, J. M. *A Treatise on Money*. New York, 1930, Chapter III.
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CHAPTER X

BANKS MAKE LOANS

The importance of bank loans. — The importance of bank loans is chiefly due to two reasons, namely, they are a source of income to the individual bank, and they affect the operation of the industrial order as a whole.

In 1939, all member banks of the Federal Reserve System received gross earnings of \$560,000,000 as interest and discount on loans, out of a total of \$1,004,000,000 on their loans and investments, or an amount equivalent to 55.8 per cent of earnings on loans and investments and 43.2 per cent of total gross income. Although the loans of member banks decreased from \$26,100,000,000 in 1929 to \$13,900,000,000 in 1939, and investments increased meantime from \$9,800,000,000 to \$19,900,000,000 in 1939, gross earnings from loans were, nevertheless, greater than the gross income from investments.

From a social point of view, bank loans are important, for upon them depends, in part, the smooth functioning of our industrial system. As the productive process has lengthened and become more and more roundabout, the dependence of the producer upon credit has increased. Credit is needed at every stage in the productive process when goods are produced for a future unknown market, whereas little credit was needed in an earlier system of production in which goods were made for a present, known market.

In granting credit for productive purposes, commercial banks engage in a selective utilization of funds. While bankers are examining loan applications to insure themselves against loss, they are also choosing to aid certain lines and to retard others. The presumption is that loans are granted more freely in the highly productive lines and less freely in the channels where their productiveness is doubtful. The bank-loan process, therefore, plays a dual role: it furnishes a source of income to the individual bank and provides one method of increasing the productivity of our economic system.

Despite these observations which support the continued importance of loans, it must be admitted that commercial banks today rely on short-term loans to support their deposit liabilities to a lesser extent than formerly. In fact, there is considerable doubt that they have ever relied on them as much as earlier academic explanations of the banking process assumed. The earlier emphasis was upon the nature of the deposit liabilities of banks and the characteristics of the assets which supported them. Deposits are demand or short-term liabilities and require, according to this view, short-term assets to maintain their ready redeemability. No one denies a great measure of validity to this view; the question is the extent to which it has been followed in practice. At times, banks have had no other choice than that of placing their funds in assets other than commercial loans, if they would keep those funds fully employed.

In 1929, the deposits of banks, both demand and time deposits, were supported largely by loans, as indicated by the fact that the total deposits of all banks at the end of that year were \$55,300,000,000 while their loans were approximately \$42,000,000,000. Ten years later total deposits were \$58,300,000,000 and total loans were \$22,200,000,000. Since loans are a higher-yield asset than investments, the trend in bank assets has been in the direction of a decrease in the high-yield type and an increase in the low-yield type. The volume of loans of member banks, according to the present classification of bank loans, is presented in Chart 2.

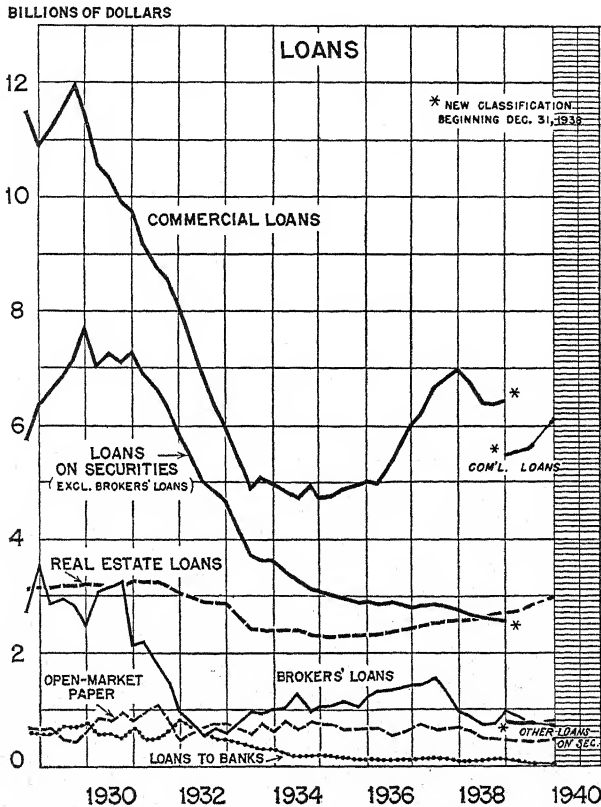
It should not be assumed, however, that all bank assets classified as loans are for short-term, commercial purposes. A careful study of the situation in 1916 revealed that approximately 50 per cent of all loans made by national and state banks and trust companies was devoted to intermediate or long-term investment purposes.¹ Whether the assets of commercial banks represent extensions of credit for fixed capital or for working capital purposes, each bank must be prepared to maintain the redeemability of its deposit liabilities at all times.

The methods that are available to a bank for meeting its liabilities may be classified under two headings: (1) It may so order its assets that maturities make funds available in about the proportions that funds are normally called for by depositors, and (2) it may shift

¹ Moulton, H. G., "Commercial Banking and Capital Formation," *Journal of Political Economy*, Part II, Vol. XXVI, 1918, pp. 638-663.

some of its assets to the open market. The first of these methods is inadequate in the event of inordinate demands by depositors. The second is available to a large number of banks at the same time only in the event of timely action by a strong central bank, if heavy losses and bank failures are to be avoided.

CHART 2. LOANS OF MEMBER BANKS



Source: *Chart Book of the Board of Governors of the Federal Reserve System.*

Perhaps the earlier emphasis on the first of these methods of supporting bank liabilities is attributable, in part, to the lack of well-organized open markets to which assets might be shifted and to the absence of a central bank in our banking system. These observations concerning shiftability of bank assets, however, relate chiefly to the bond holdings of banks. Succeeding chapters take up the investment problem of banks and the larger question of how banks,

as members of a banking system, prepare to pay claims. We are here concerned chiefly with the loan problem from the standpoint of the individual bank.

Classification of loans. — In this chapter we shall follow the classification of loans used by the *Federal Reserve Bulletin*. This classification has been changed in several particulars from time to time, the last change having been made in the reports as of December 31, 1938. This latest form is adopted here because practically all the available recent data on member-bank loans follow it. Table 14 reveals the volume of each class of bank loans.

TABLE 14. LOANS OF MEMBER BANKS ON SELECTED CALL DATES

(In millions of dollars)

Call date	Total loans and in- vest- ments	Loans							
		Total	Com- mer- cial, in- dus- trial, and agri- cul- tural	Open mar- ket paper	Loans for purchasing or carrying securities		Real estate loans	Loans to banks	Other loans
					To brok- ers and deal- ers	To others			
Total — All Member Banks									
1929 — Dec. 31	35,934	26,150	.....	583	2,463	7,685	3,191	714	11,515
1933 — June 30	24,786	12,858	.....	595	953	3,752	2,372	330	4,857
1938 — Mar. 7	31,521	13,546	.....	607	878	2,665	2,556	96	6,745
June 30	30,721	12,938	.....	492	701	2,614	2,613	120	6,397
Sept. 28	31,627	12,937	.....	484	713	2,590	2,661	126	6,364
Dec. 31	32,070	13,208	5,448	442	973	775	2,716	125	2,728
1939 — Mar. 29	32,095	13,047	5,531	427	838	733	2,749	99	2,671
June 30	32,603	13,141	5,571	420	731	736	2,828	58	2,796
Oct. 2	33,075	13,470	.....	.....	.....	.....	.....	.....	.....
Dec. 30	33,941	13,962	6,115	455	790	700	2,957	56	2,888
1940 — Mar. 26	34,163	13,939	.....	.....	.....	.....	.....	.....	.....

Source: *Federal Reserve Bulletin*, July 1940, p. 694.

Distribution of bank loans. — The Federal Reserve report on member bank loans classifies them chiefly in terms of the purposes

for which banks extend credit. These purposes are indicated in Table 12, which gives the percentage distribution on a recent date of member bank loans by types and by classes of banks.

TABLE 15. LOANS OF MEMBER BANKS, DECEMBER 31, 1938
(Per cent distribution of amounts by types and by classes of banks)

	<i>All mem- ber banks</i>	<i>New York City banks*</i>	<i>Other reserve city banks†</i>	<i>Coun- try banks</i>
Brokers' loans	7	24	3	1
Open-market paper	3	4	3	3
Commercial and industrial loans	36	45	4†	24
Agricultural loans	5	(**)	4	11
Real estate loans: Total	21	4	22	30
On farm land	2	(**)	2	4
On residential properties	13	2	14	19
On other properties	6	2	6	7
Loans for purchasing or carrying securities	6	7	6	5
Other loans	22	16	21	26
Total loans	100	100	100	100

Source: *Federal Reserve Bulletin*, April 1939, p. 260.

* Central reserve city banks.

† Includes central reserve city banks in Chicago, also out-of-town branches of reserve city banks.

** Less than 0.5 per cent.

In commenting on the results of these computations, the *Federal Reserve Bulletin* says:

About 10 per cent of member bank loans may be called open market loans and the remainder are customers' loans, that is, loans made largely on the basis of a customer relationship between the bank and the borrower. Most of the open market loans are made by New York City banks and represent loans to New York brokers and dealers in securities. Almost one-quarter of the loans of New York are of this sort. In addition, New York banks hold a moderate amount of bankers' acceptances. Reserve city banks have a few brokers' loans and hold some acceptances and commercial paper, while the open market loans of country banks are practically all in commercial paper, including short-term paper of finance companies. About 95 per cent in amount of the loans of both country and city member banks outside of New York are in customer loans. In New York City, the proportion is 72 per cent. City banks made between 40 and 45 per cent of their loans to commercial and industrial borrowers, while at country banks the proportion is about half as large. This difference is partly

made up by the greater volume of agricultural loans at country banks, which amount to about one-tenth of their total loans.

Country banks also have a larger proportion of their loans made against real estate, 30 per cent as against 4 per cent for New York City banks and 22 per cent for other reserve city banks. Country banks as well as city banks extend relatively small amounts of loans on the basis of farm land. About two-thirds of their real estate loans are on residential properties and nearly a fourth is on commercial and industrial properties.

So-called "other" loans, which are made up of loans not separately classified, are relatively largest at country banks, amounting to 26 per cent of total loans at these banks, 16 per cent at New York banks, and 21 per cent at other city banks. These differences may be an indication either that a larger share of country bank loans is personal loans, etc., or that country banks have greater difficulties in properly classifying a larger part of their loans.²

CUSTOMERS' AND OPEN-MARKET LOANS COMPARED

The customers' loan market is characterized by personal considerations such as those ordinarily involved in dealings between banks and their regular customers. In the open market, on the other hand, the operations of both borrowers and lenders are impersonal. A lender in the open market (who is the buyer of open-market paper) does not look to a particular borrower with which to establish a continuous creditor-debtor relationship. Nor does a borrower (the person or firm which offers paper for sale in the open market) expect to establish a line of credit with a particular lender. In the open market each transaction is consummated without regard to the past operations or expected future operations of particular persons. The borrower offers paper for sale by turning it over to a notebroker who finds a buyer for it. Hence the borrower does not know the identity of the prospective lender. When a loan in the open market matures, it must be paid; there is no extension of time for payment and no renewal.

In the customers' market the banker feels obligated to grant the reasonable demands of his customers for loans because the continued success of his bank depends on his ability to retain the good will of his customers, while customers often borrow from their local bank despite the fact that they may, at times, obtain credit accommodation at a lower rate elsewhere. In other words, the customers wish to make their banker feel obligated to them so that in time of

² April 1939, pp. 262-263.

need they can be reasonably certain of obtaining some accommodation. Extensions and renewals are common in the customers' market; so much so that both the lenders and borrowers frequently expect a short-term loan to become a long-term loan.

In this chapter, we are concerned chiefly with loans made by banks to their customers and the administration of the typical loan department rather than with open-market loans.

LOANS TO CUSTOMERS

The three important classes of customers' loans are: (1) commercial, industrial, and agricultural loans, (2) real estate loans, and (3) other loans. These are listed according to volume from the highest to the lowest, although the volume of the residual item called "other loans" may, at times, exceed that of real estate loans.

Commercial and industrial loans. — Most of the loans of commercial banks are extended to meet the commercial needs of customers, such as the purchase of raw materials and the financing of goods in process of production, in storage, or in transport. Some loans classified as commercial loans are, however, investment loans since the borrowed funds are used for fixed capital purposes, such as the purchase of industrial equipment, the building of warehouses, etc. In recent years an increase in the so-called term loans has taken place. These loans represent in part refunding of outstanding obligations. Unfortunately, data are not available which reveal the true character of the commercial and industrial loans, although the new classification of loans presented in the *Federal Reserve Bulletin* gives a clearer picture of the purposes for which banks make loans.

Other loans. — The so-called other loans is a residual item in the Federal Reserve classification of bank loans. Many of these are personal loans, the proceeds of which are used for such diverse purposes that they are difficult to classify.

Both commercial and industrial loans and other loans are secured by numerous types of instruments. Some of them have no specific security. The security which borrowers offer on these two types of loans is not clearly indicated by the present Federal Reserve classification. In the case of real estate loans, agricultural loans, and loans for purchasing and carrying securities, the security is likely to

be real estate mortgages, chattel mortgages on farm property, and stock exchange collateral respectively.

Customers' loans on securities. — The purposes for which customers borrow funds from commercial banks and offer stocks and bonds as collateral are varied. Some borrow for consumption purposes, others for productive or commercial purposes, and still others for speculative purposes. Whatever the customer's purpose might be, the chief concern of the bank making this type of loan is the market value and the marketability of the collateral it receives. Bankers generally prefer securities which are listed on a well-known exchange; among these, they prefer those stocks or bonds actively traded. If the securities offered as collateral are active on a well-known exchange market, it is an easy matter for the banker to observe the daily fluctuations in their market price. With this type of collateral, since the bank can always sell the collateral to secure payment, the lender is protected against loss, except in very unusual situations, such as when securities suffer a decrease of 50 per cent or more in a very short time.

In a few instances, however, an unlisted stock or bond affords greater protection to the bank holding them as collateral than others which are listed on a major exchange. There exists a quite active demand for the stocks and bonds of some firms or corporations which have a long record of earnings, dividends, and good management, although those stocks and bonds are not listed. Frequently, however, these securities have only a local market and a situation may develop in which there occurs widespread liquidation of securities and in which the lending bank suffers heavy withdrawals of deposits. In such circumstances, the bank holding collateral with only a local market may find that the only buyers of the collateral, which the bank now has power to sell, are its own depositors. The sale of the collateral, therefore, does not alleviate the cash position of the bank. Hence, listed securities usually offer more protection than those which are unlisted and have only a narrow local market.

The margin of safety on customers' security loans. — The Securities and Exchange Act of 1934 placed the entire matter of margin requirements on speculative commitments under the supervision of the Board of Governors of the Federal Reserve System. In accordance with this act, the Board issued Regulation T on September 27,

1934, by which the extension and maintenance of credit by brokers and members of national securities exchanges is regulated. The margin requirements that the Board first made have been changed from time to time with changing conditions in the security markets.

After the issuance of Regulation T, the Board of Governors considered the advisability of issuing a regulation relating to loans by banks for the purpose of purchasing or carrying securities registered on national securities exchanges. By March 1935, the Board ³ was convinced that such regulation was needed for the following reasons.

1. An upward trend in the amount of credit extended and maintained by brokers and in the amount of brokers' borrowing at banks had developed. This amount might lead in the aggregate to the use of more credit for such purposes than would be to the public's interest.

2. The operation of Regulation T required brokers to obtain as margin on their security loans to customers an amount of collateral much larger than that commonly required by banks on corresponding loans to customers. Under these circumstances it was possible for a borrower to obtain credit at a bank by providing a margin smaller than that required by a broker.

Accordingly, the adoption of a regulation designed to reduce or eliminate this differential seemed to be a necessary step toward the effective operation of such a method of credit control.

In its annual report for 1936, the Board of Governors described its action as follows:

In order to place borrowing for speculative purposes, whether from brokers or from banks, on as nearly an equal basis as the law and the differences in the nature of the enterprises would permit, and in order to place the Board of Governors in a better position to control a speculative expansion, the Board adopted Regulation U, fixed a uniform margin requirement of 55 per cent on loans subject to Regulation U, and amended Regulation T, effective April 1, 1936, to place the margin requirements on loans by brokers and dealers on the same basis. Adoption of the 55 per cent requirement in Regulation T made the required margins on all registered securities the same as those previously required on securities that had had a rapid rise in price. About three-fourths of the trading in stocks on the exchanges was in securities already subject to these higher requirements, and the new rule raised the requirements for all registered securities to the same level.⁴

³ *Annual Report of the Board of Governors of the Federal Reserve System*, 1936, p. 212.

⁴ Pp. 32-33.

Regulation U, as well as Regulation T, has been changed from time to time and certain exceptions to the rule have been made. The most important of these exceptions is that the regulation does not restrict the privilege of a bank to extend credit for commercial, agricultural, and industrial purposes or for any other purpose than that of purchasing or carrying stocks registered on a national securities exchange.

Amount of loans to customers on securities. — The extent to which loans to customers with security collateral are favored in central reserve city, reserve city, and country banks is shown in Table 16.

TABLE 16. LOANS TO CUSTOMERS (OTHER THAN BROKERS) ON SECURITIES *

(December 31, 1937. In millions of dollars)

<i>Banks</i>	<i>Amount</i>	<i>Total loans to customers</i>
New York City banks.....	733	2,817
Chicago banks.....	129	615
Reserve city banks.....	1,066	4,996
Country banks.....	824	4,210

* This classification of loans was abandoned in 1938. On December 31, 1929, the volume of this class of loans by member banks totaled \$7,685,000,000.

Agricultural loans. — It is the business of commercial banks in farming communities to meet some of the credit needs of farmers, just as it is the business of commercial banks in industrial communities to supply part of the credit needs of industrialists. Loans to farmers are made for a great variety of purposes — for buying seed, fertilizer, livestock, implements, drainage, fencing, repairs for buildings, etc. Sometimes the lending bank takes a real estate mortgage to secure a loan for a productive purpose; sometimes a chattel mortgage, to secure a loan which is for investment purposes.

The high cost of inspection, maintenance, and collection of loans to farmers and the great risks which the lending banks assume is often deplored. There is a great measure of justification for this attitude toward agricultural loans, yet the same criticisms apply to many bank loans to other lines of business. Banks in industrial areas set up credit departments at very great cost to determine the risk element in loans to business firms. Here, too, banks must bear

high costs of inspection, maintenance, and collection. Many lines of business, for example the retail grocery business, are about as unstable and risky as farming.

Many of the credit needs of farmers cannot be met in an adequate manner by the small commercial banks located in the farming communities. These banks cannot carry a large number of loans of intermediate and long maturities. They are equipped to make only short-term loans, some of which they hope to be able to renew, perhaps several times. Since commercial banks have been unable to give farmers adequate credit facilities, loan companies of all kinds operated in farming communities, charged high rates of interest, and imposed upon the borrowers high commissions for renewing the loans they made. The farmers needed access to the money markets of the financial centers. This has been furnished under the sponsorship of the federal government in recent years. The Federal Land Banks, the Federal Intermediate Credit Banks, the Banks for Cooperatives, and the Production Credit Corporations are the permanent agencies through which farmers have obtained credit at low rates of interest.

Real estate loans. — Bank loans on real estate mortgages have played a much more important part in the history of banking in the United States than their present volume would indicate. In the early history of American banking, frequent overexpansion of real estate loans resulted in general disaster. It is likely that these experiences furnish the explanation for the fact that the National Bank Acts of 1863 and 1864 did not authorize the national banks to make real estate loans. State banks and trust companies in many states, however, were permitted to make such loans. In many rural districts these loans furnished the chief opportunity for banks to extend credit to customers on a secured basis, since commercial transactions were very limited in those areas.

The Federal Reserve Act of 1913 permitted national banks outside the large cities to make farm-mortgage loans. Loans secured by mortgages on urban real estate up to twelve months' maturity were permitted on a restricted basis. Later, the authority was broadened still more, so that today national banks may make loans on first mortgages on urban or farm realty.

The National Bank Act still limits the granting of credit on the basis of real estate mortgages as the following provisions, as

amended in 1935, specify. A national bank may purchase, hold, and convey real estate for the following purposes, and for no others: (1) such as shall be necessary for its accommodation in the transaction of its business; (2) such as shall be mortgaged to it in good faith by way of security for debts previously contracted; (3) such as shall be conveyed to it in satisfaction of debts previously contracted in the course of its dealings; (4) such as it shall purchase at sales under judgments, decrees, or mortgages held by the bank, or shall purchase to secure debts due to it. But no bank shall hold the possession of any real estate under mortgage, or the title and possession of any real estate purchased to secure any debts due it, for a longer period than five years.

Any national banking association may make real estate loans secured by first liens upon improved real estate, including improved farmland and improved business and residential properties. The amount of any such loan hereafter made shall not exceed 50 per cent of the appraised value of the real estate offered as security and no such loan shall be made for a longer term than five years, except that (1) any such loan may be made in an amount not to exceed 60 per cent of the appraised value of the real estate offered as security and for a term not longer than ten years if the loan is secured by an amortized mortgage, deed of trust, or other such instrument under terms of which the installment payments are sufficient to amortize 40 per cent or more of the principal of the loan within a period of not more than ten years, and (2) the foregoing limitations and restrictions shall not prevent the renewal or extension of loans heretofore made and shall not apply to real estate loans which are insured under the provisions of Title II of the National Housing Act. No such association shall make such loans in an aggregate sum in excess of the capital stock of such association paid in and unimpaired plus the amount of its unimpaired surplus fund, or in excess of 60 per cent of the amount of its time and savings deposits, whichever is the greater.

The reasons for these limitations are generally appreciated by the officers of national banks. The laws regulating real estate loans of state banks are too varied and numerous to mention here.

The volume of real estate loans. — The relative importance of real estate loans to different classes of banks on December 31, 1939, is set forth in Table 17.

TABLE 17. REAL ESTATE LOANS OF MEMBER BANKS
ON MARCH 29, 1939

(In thousands of dollars)

<i>On farm lands:</i>	<i>Amount</i>	<i>Total loans</i>
New York City banks.....	278	3,086,297
Chicago banks.....	222	545,278
Reserve city banks.....	93,372	4,936,149
Country banks.....	184,912	4,479,551
<i>On other real estate:</i>		
New York City banks.....	141,403	3,086,297
Chicago banks.....	11,189	545,278
Reserve city banks.....	1,080,380	4,936,149
Country banks.....	1,049,531	4,479,551

Merchandise loans. — Merchandise loans represent extension of bank credit secured by commodities of various kinds, represented by warehouse receipts, bills of lading, or trust receipts. The notes, drafts, and bills of exchange so secured are often referred to as commodity paper, which has been defined by the Board of Governors as "a note, draft, bill of exchange, or trade acceptance accompanied and secured by shipping documents or by a warehouse, terminal, or other similar receipt covering approved and readily marketable, non-perishable staples, properly insured."

This definition states the characteristics which merchandise loans should possess. Some of the risks which attend this type of loan are:

1. The collateral may be subject to destruction or deterioration.
2. The financial strength of the warehouse or transportation company may be questionable.
3. The collateral may shrink in market value as well as in volume.
4. Grading may be faulty.
5. The borrower who is privileged to make substitutions in the collateral may not make them honestly.

When these risks are carefully guarded against, commodity paper is an excellent earning asset of commercial banks and other financial institutions.

Commodities or merchandise to be acceptable as security for a bank loan should be staple, marketable, and relatively nonperishable goods which are exchanged in organized commodity markets.

The trading in these markets for the commodities in question should be reasonably active so that frequent quotations are forthcoming and the ability to sell at a price near prevailing levels is probable. Commodity markets possessing these attributes are those for cotton, wheat, corn, lard, butter, tobacco, rubber, silk, coffee, copper, lead, sugar, and other staple commodities.

The legal rights of the lender on these loans are set forth in various laws which are designed to protect both borrowers and lenders and to avoid wide differences in policy and practices in the market for each kind of commodity paper. These laws include the Uniform Negotiable Instruments Law, the Federal Bill of Lading Law, the United States Warehouse Act, the Uniform Warehouse Receipts Act and various state laws which regulate the storage and shipment of goods.

Loans secured by warehouse receipts. — Warehouse receipts are certificates issued by warehousemen as evidence of the storage of goods in a warehouse by the owners of those goods. The certificate is evidence of ownership and a means of transferring ownership when drawn up in assignable form. Only recently have warehouse receipts attained a high standing as collateral for bank loans, although they have been used as collateral in various forms since ancient times. In the United States, numerous abuses among and differences between state laws led to the enactment of the United States Warehouse Act in 1916, followed by the Uniform Warehouse Receipts Act which was accepted as the law of many states. This act removed a number of abuses and had the effect of increasing the use of warehouse receipts as collateral for bank loans by reason of the fact that the rights and privileges of the parties to them are more clearly defined.

The United States Warehouse Act permits the chartering of a warehouse for the storing of agricultural commodities. Originally charters were granted for the storing of cotton, wool, grain, flaxseed, and tobacco. An amendment in 1923 gave the Secretary of Agriculture discretion to enlarge the scope of the act. More recently the storing of agricultural products has taken on increased importance with the activities of the Secretary of Agriculture in dealing with the problem of agricultural surpluses.

Loans secured by bills of lading. — The holder of a negotiable bill of lading may secure possession of the goods if, for example, the con-

signee fails to make the payment agreed upon. This form of instrument is considered acceptable collateral for a bank loan to the shipper to finance him during the marketing period. Although the bank, in case of nonpayment by the buyer, may obtain possession of the goods and sell them to meet the terms of its advance payment, the lender does take certain risks. The quality of the goods may not be as high as expected; the market for the goods may not be good; and the bill itself may be fraudulently drawn. Hence the bank which receives an application for a loan with bill-of-lading collateral acquaints itself with the character and financial standing of the shipper before extending such credit. It, furthermore, satisfies itself that the goods in question can ordinarily be sold at a price sufficient to cover the amount of the credit extension. In other words, the goods should be staple, marketable, and nonperishable.

Trust receipts. — The purpose of the trust receipt is to enable the lender to retain title to the goods specified in documents attached to it and still allow the borrower possession of them. The bill of lading for the goods is turned over to the debtor so that he might store them, sell them, or use them in some manufacturing process. In lieu of the bill of lading, the lender is provided with a trust receipt in which the borrower agrees to deliver a warehouse receipt in case the goods are stored, or agrees to apply the sale price to retire the loan in case the goods are sold, or agrees to satisfy the lender in another manner if the goods are to be used in a manufacturing process. In the latter case, it is sometimes difficult to trace the goods and an innocent buyer of them may obtain good title as against the claim of the holder of the trust receipt. Herein lies one danger to the lender under this form of collateral. Hence the trust receipt, although used extensively, especially in foreign-trade transactions, is not an altogether satisfactory form of collateral. The lender should, of course, extend credit on these terms only to persons or firms with reputations above reproach.

Loans on receivables. — The collateral offered on receivables may be either accounts receivable or bills receivable. Accounts receivable are not generally regarded by bankers as satisfactory collateral for loans to customers. The chief reason is that banks are not usually in a position to protect themselves against loss and do not have the facilities for adequate checking of the value of the accounts before the loan is made, or facilities for adequate checking

of changes in their value after the loan is made. Other financial concerns, such as finance companies, have more adequate facilities for such investigation and supervision.

Despite these disadvantages, some banks recently have announced their willingness to purchase accounts receivable, to supplement existing lines of credit, or to open up bank credit to those customers who are not entitled to an unsecured line.⁵

Bills receivable are quite commonly used in interbank lending, in which case they are regarded as acceptable collateral. When one bank borrows from another and uses bills receivable as collateral, the bills in question carry the endorsement of the borrowing bank and give the lending bank a claim which is usually honored without delay. Bills receivable are not often offered by customers as collateral, except in the larger financial centers. Some banks in these centers have as borrowers the large commercial paper houses which offer bills receivable as collateral for bank loans when they need funds temporarily to take over a block of commercial paper. In this instance, the lending bank possesses collateral of various descriptions, but little or no supervision over it is needed because it has the credit of a reputable and strong financial firm backing it. These loans are considered excellent risks, since the borrower frequently has about as strong a financial position as the lending bank.

Instalment loans. — During the past two decades one of the most significant developments in the field of finance has been the rapid growth in the volume of business conducted by all kinds of companies extending loans to consumers. Commercial banks have become involved in this development in two ways: (1) Finance companies issue their own paper secured by blocks of their receivables and sell this paper to banks and other buyers, and, (2) a considerable number of banks have ventured into the field, so lucrative has been this type of business.

One type of company very prominent in this development is the so-called finance company or credit company or instalment company. These companies finance the sale of articles on the instalment plan, lend against accounts receivable, and make loans against merchandise collateral. Most commercial banks have been content to allow these institutions with specialized facilities to

⁵ See *The Burroughs Clearing House*, November 1938, for a description by E. A. Mattison of the Bank of America's nonnotification plan of financing accounts receivable.

handle large masses of instalment paper since the banks are not equipped to do so. Banks are, however, willing to extend credit to these specialized institutions against the pledge of instalment paper and to allow them to act as intermediaries between the banks and the purchasers of goods on the instalment plan. The banks receive only a small return on loans to the finance companies, but they escape the performance of many of the functions which the finance companies assume. The functions of investigation, supervision, and collection are taken over by the finance companies. Banks also escape the necessity of repossessing goods by lending directly to the finance companies. This plan is desirable since they are not in a position to dispose of repossessed automobiles, radios, washing machines, furniture, etc. Apparently those banks which have been content to allow the finance companies to act as intermediaries between themselves and the general public believe that the activities of the finance companies are not proper commercial banking operations and, furthermore, that the cost is prohibitive.

Other banks have formed special departments whose function it is to engage in all or some of the same operations as those undertaken by the finance companies. They have felt that the costs of these operations are amply covered by the income derived from the direct handling of instalment paper. Some of these operations, such as repossessions, can be turned over to various agencies doing this type of business.

Unsecured loans. — The banks of the United States have been more willing than those of many other countries, for example those of England, to extend credit on an unsecured basis. This fact may be attributed to our unit system of banking and to the lack of available collateral in the newly settled areas in the earlier periods of our country's economic development.

Our independent or unit system of banking favors the unsecured loan because of the intimate contact of the bankers with their customers. In a few large banks with numerous branches, the loan policy is determined in some central office far removed from the customers who apply for loans at one of the branches. This policy usually dictates an insistence upon adequate security. In a small unit bank the banker knows his customers and their businesses. To him the character of the applicant and his capacity to pay are more important than collateral. Among the larger banks as well

as among the smaller ones, the showing of a financial statement and the analysis of it by the credit department is frequently accepted as a sufficient basis for the extension of credit. Business firms and individuals build up a line of credit with their banks, which entitles them to credit accommodation.

Frontier conditions have fostered the unsecured loan in the United States because the banks in the frontier communities have been deeply involved and interested in the rapid development of those communities. A firm faith that bigger and better things were in store for all, prompted bankers to extend credit to borrowers who could do "big things" if they could get capital with which to begin their ventures. Most of the applicants for loans in the newly settled areas had no readily negotiable collateral to offer — "faith in the future of America" was the security they offered and this they possessed in abundance.

In addition to these rather intangible considerations, the granting of unsecured loans finds support in the fact that the loss ratio on the unsecured loans of banks has not been great. Many banks have experienced a lower loss ratio on their unsecured loans than on their secured loans. The reason for this experience is contained in the following observation:

In reality the term "unsecured" is somewhat misleading, for, strictly speaking, a good unsecured loan is adequately secured. The borrower does not pledge collateral, but he presents a balance sheet, a profit and loss statement, and an antecedent record as the basis for the loan. The banker grants the loan on the financial strength of the business as revealed by the financial statements, together with such other considerations as the character and reputation of the borrower, his business ability, past business experience, and relationship with the bank. The loan is not actually unsecured, in the sense that there is no assurance of payment, for it is in reality secured by the entire business and its unpledged assets.⁶

Overdrafts. — The overdraft is a method of extending credit quite commonly used in England and other European countries. Overdrafts may be either secured or unsecured. In any case, they must be applied for and approved in advance; otherwise they are regarded with extreme disfavor. In the United States, the National Bank Act forbids overdrafts and the banking laws of the states either forbid them or limit the extent to which they can be used. In most

⁶ Prochnow, Herbert V. and Foulke, Roy A., *Practical Bank Credit*, p. 28. New York: Prentice-Hall, Inc., 1939.

cases, the overdraft, according to American banking practice, is a result of carelessness or ignorance on the part of the depositor.

LOANS TO BANKS

Banks in the larger financial centers frequently lend funds to their correspondent banks in the smaller towns and cities. The demands of these small banks are largely seasonal. At times the demand is irregular, rather than seasonal, such as the demand arising from the need for meeting an unexpected withdrawal of funds by customers. These loans to correspondent banks are usually secured by receivables or securities or both. The tendency is in the direction of bond security because a large number of country banks keep their bonds lodged with their city correspondents and because the proportion of bonds to other forms of bank assets in recent years has increased. These loans are entered and reported as bills payable by the borrowing banks.

The extent to which a city bank grants credit to a country bank correspondent depends on a number of factors, chiefly:

1. The average balance kept with it by the country bank.
2. The reputation of the borrowing bank as to management, financial standing, etc.
3. The paper offered, i.e., whether eligible or ineligible for rediscounting at a Federal Reserve bank.
4. The marketability of the bonds offered as collateral.
5. The legal limitations which restrict a bank's debts relative to its capital funds.

Most country banks are reluctant to show the item bills payable on their published statements. This attitude tends to keep the volume of interbank borrowing at a comparatively low level. Another incentive for keeping these loans small is that many bank customers object to having their notes used as collateral.

Table 18 shows the volume of member-bank loans to banks.

TABLE 18. VOLUME OF LOANS TO BANKS MADE BY
MEMBER BANKS, OUTSTANDING ON MARCH 29, 1939

Total — all banks	\$99,389,000
New York City banks	77,061,000
Chicago banks	285,000
Reserve city banks	16,512,000
Country banks	5,531,000

STATUTORY LIMITATIONS ON BANK LOANS

The loan policy of banks in the United States is influenced or controlled in their respective jurisdictions, by

1. The government of the United States, through its power to amend the National Bank Act and its general powers to establish financial agencies.
2. Each of the state governments, through agencies set up to control state banks.
3. The Board of Governors of the Federal Reserve System, through its control over member banks.
4. The Federal Deposit Insurance Corporation, through its power over insured banks.
5. The Reconstruction Finance Corporation, through its proprietary and contractual powers over all banks to which it has made advances.

The exercise of the powers granted to regulatory agencies has resulted in the adoption of numerous regulations and prohibitions concerning banks and their activities. Some of these regulations, such as those which apply to the real estate loans of national banks and the prohibition against the handling of brokers' loans for the account of others, have already been mentioned.

These government agencies influence the loan policy of banks under their jurisdiction through powers granted them in the broad, sweeping terms of some statute. For example, the Federal Deposit Insurance Corporation exercises great influence and power through its general authority to develop and maintain a sound banking system. The statute setting up the corporation does not state specifically that it shall have power to determine the ratio between capital funds and deposits, but it may refuse the privileges of federal deposit insurance to a bank which does not live up to certain prescribed standards. Then, too, certain specifically granted powers, such as that of the Board of Governors to refuse to rediscount eligible assets of banks which are not conducting their affairs in a satisfactory manner, can be used as a threat which may influence loan policy considerably. The Board of Governors is also empowered to fix the rediscount rates, which it may do in a manner that favors certain types of loans and investments over others.

At this point we are not so much interested in central bank policy as in some of the specific limitations now in effect on loans of banks. The following list is not complete, nor is it likely to be absolutely accurate, so numerous and rapid have been the recent changes in some of these regulations. It is intended merely to indicate the scope of the prohibitions and regulations concerning bank loans. Some of the items which follow apply to national banks only, some to member banks, and some to insured banks.

1. A member bank shall not lend on the security of its own capital stock, nor shall it purchase or hold such capital stock, except when necessary to prevent loss upon a credit previously granted in good faith. Shares so acquired must be sold within six months.

2. A member bank may not make a loan of more than \$2,500 to any of its executive officers. It may only make a loan to an executive officer with the approval of the entire board. An executive officer of a member bank who becomes indebted to any other bank must make a written report to the board of directors of the bank of which he is a member, stating the amount of the indebtedness, the security therefor, and the purpose to which the borrowed funds are to be applied. Executive officers who violate this rule are subject to removal from office, and other officers and directors are subject to fine and imprisonment for extending the loan.

3. No member bank, its officers, directors, or employees may lend funds or make a gift to any bank examiner.

4. The Board of Governors of the Federal Reserve System may fix for each Federal Reserve district the maximum percentage of its capital and surplus which may be loaned by a bank on stock and bond collateral. The Board may also "direct any member bank to refrain from further increase of its loans secured by stock or bond collateral for any period up to one year under penalty of suspension of all rediscount privileges at Federal Reserve banks." After reasonable notice, the Board may suspend a member bank from the use of the rediscount privilege of the Federal Reserve System when in the judgment of the Board, such member bank is making undue use of bank credit "for the speculative carrying of or trading in securities, real estate, or commodities, or for any other purpose inconsistent with the maintenance of sound credit conditions."

5. No officer, director, employee, or attorney of a bank may take any consideration from an applicant borrower for procuring

or endeavoring to procure any loan from or discount of any paper by a bank.

6. The Board of Governors has the power, granted by the Securities and Exchange Act of 1934, to prescribe rules and regulations from time to time, with respect to the amount of credit that may be extended and maintained on any security, other than exempted securities, registered on a national securities exchange. Regulation T (mentioned on page 238) applied this power to brokers and dealers in securities. Regulation U (see page 240) relates to loans by banks for the purpose of purchasing or carrying securities registered on the large security exchanges.

7. The National Bank Act forbids a national bank from allowing the total obligations of any person, partnership, or association to that bank to exceed at any time an amount in excess of 10 per cent of its unimpaired capital and surplus. The obligations referred to in this regulation include the direct liability of a maker of an instrument, an acceptor of paper discounted, the endorser, or guarantor. When a corporation is the borrower, the subsidiaries in which it owns or controls a majority interest are considered a part of that corporation. A number of exceptions to this so-called 10 per cent rule are permitted, however.

THE CREDIT DEPARTMENT

The development of credit departments. — Credit departments of commercial banks, as integral parts of bank organization, had their origin in the last decade of the nineteenth century when some New York banks established them. At the beginning of the present century, they were organized by the large banks in all sections of the country. Several factors have been responsible for their growth in number, size, and importance. Most important are:

1. The growth in the size of banks to such proportions that bank officials find it impossible to acquaint themselves with all bank customers.
2. The growth of the commercial paper market and other divisions of the open market for loanable funds.
3. The requirements of the Board of Governors of the Federal Reserve System, and the Federal Deposit Insurance Corpora-

tion that financial statements be obtained from applicants for loans in many cases.

4. The increased scope of the credit services performed by city banks for their country correspondents.

Not all banks need or can afford credit departments. In small banks, which engage only in a local business, the officers are chosen with a view to their intimate knowledge of the legitimate credit needs of the bank's customers and the risks inherent in loans to them. For any out-of-town business which these banks do, they may rely upon their city correspondents. For those banks whose business is large in volume and covers a wide area, a credit department is an integral part of bank organization and banking procedure. The scope of the activities of the credit department of each bank depends largely on the cost factor. The credit department must justify the cost of its maintenance.

The functions of the credit department. — In the following summary of the functions of the credit department, we assume that the bank or banks in question are large enough to justify the scope of the activities stated or implied. The functions of a credit department are:

1. The collection of information concerning individual and firm with whom the bank or its customers deal.
2. The analysis of this information.
3. The classification and filing of this information, and the making of it available to anyone whom the bank officers think should be permitted to use it.

Organization and procedure of the credit department. — A typical credit department is composed of (1) an investigation section, (2) an analysis section, and (3) an information section. In certain relatively large banks, the credit department is usually administered by one of the vice presidents, with an assistant vice president directly in charge of it. The *investigation section* collects and compiles information concerning the financial standing of customers, prospective customers, business firms or individuals about which customers inquire, the makers of bills receivable discounted by the bank, and the endorsers of customers' notes and other instruments. It collects and compiles information concerning the collateral pledged as security for advances made to customers. In addition to these activities, some large credit departments collect

and compile data on trade conditions which affect the past and future loans of the bank, including price movements in the commodity markets.

The *analysis section* examines the records of business firms, reduces the data contained therein to a comparable basis, calculates ratios, etc. On the basis of data assembled, this section prepares analytical reports which aid in making judgments concerning credit risks. All the data collected by the investigation section and all the work of the analysis section are assembled in credit folders, which the analysis division reviews at regular intervals so that loaning officers have as much relevant current information as possible. The work of filing this information may be so great as to necessitate the organization of a filing section. These files are not merged with the general files of the bank, since they must be made readily available and since they contain confidential material.

The *credit information section* furnishes credit information to officers of the bank, especially the loan officers and assistant loan officers. It also furnishes information to the credit departments of other offices of the bank and to others outside the bank to whom some officer has directed that it be furnished. This section also keeps a record of the average balance in customers' accounts on *average balance cards*, which is information every loan officer must have.

Procedure. — The procedure by which an application for a loan is handled may be very briefly summarized as follows. When an application for a loan is received from a prospective customer, the credit department conducts an investigation by means of personal interviews with banks and business firms with which the applicant has done and is doing business. These personal interviews are supplemented by information received from other sources, such as the mercantile agencies and credit exchange bureaus. The financial record of the applicant as shown by his financial statements and his record concerning payments to creditors is, of course, analyzed thoroughly. All of this information is submitted to the loan officer in charge of the loans of the type applied for. If passed upon favorably by the appropriate loan officer, the application, with comments attached by those officers through whose hands it has passed, is forwarded to the discount committee or to the entire board of directors and made a part of the permanent records of the bank. By this procedure the applicant is granted a loan or a

line of credit or has his paper discounted or accepted by the bank.

The borrower's financial statement. — At times it is a matter of custom and policy, at other times a matter of fulfilling legal requirements, that banks ask for financial statements from their borrowers. The Federal Reserve banks require a financial statement when a note is offered for rediscounting, and the Federal Deposit Insurance Corporation requires that all insured banks obtain financial statements of all borrowers of sums of more than \$500.

In the following brief account of the analyses of financial statements which banks make, the borrower is assumed to be a business firm. Financial statements should include both a balance sheet and a profit and loss account. They are most valuable to a bank when prepared by a public accountant, but, even then, they are not generally altogether satisfactory to a bank. The lack of uniformity in the preparation of financial reports, whether prepared by public accountants or otherwise, makes it imperative that the credit departments of banks break them down so that they may be transcribed on a so-called comparative statement sheet. Only by so doing can comparisons be made accurately and the credit position of the borrower be determined. The comparisons referred to include: the comparison of the latest year with the average of a number of years' operations of the company, comparison of the prospective borrower with other companies in the same industry, and comparisons of one industry with another.

Ratio analysis. — The purpose of ratio analysis is to reduce items to a comparable basis and to facilitate the comparison of a certain financial position with some preconceived notion of what constitutes a good financial position. This preconceived notion of a normal position may be faulty, but if obtained from long experience and research it furnishes the best available basis for rendering judgment.

Various methods of ratio analysis are used by banks, perhaps the most popular being those developed by Alexander Wall, secretary of the Robert Morris Associates, an organization of bank credit men.⁷ He classifies ratios as *static* and *dynamic ratios*. Static

⁷ See Wall, Alexander and Duning, R. W., *Ratio Analysis of Financial Statements*, especially pp. 125-140. New York: Harper & Brothers, 1928. The brief discussion of ratio analysis presented here is a condensation of that developed by Wall and Duning.

ratios are those found in the balance sheet itself, which reflect a situation at a particular moment of time. Dynamic ratios are those which concern sales in relationship to several financial statement items and which reflect the efficiency or inefficiency, the vitality or lack of vitality, of the operations of the firm being analyzed. The most important static ratios are: (1) the current ratio, (2) net worth to debt, (3) net worth to fixed assets, and (4) receivables to merchandise. The most important dynamic ratios are: (1) sales to receivables, (2) sales to merchandise, (3) sales to fixed assets, and (4) sales to net worth.

The current ratio is derived by dividing the total current assets by the total current liabilities. The result indicates the amount of current assets as offset for the amount of current debt. The higher this ratio the more likely it is that creditors will receive prompt and complete payment on demand. Important though the current ratio is, it is not the most important in all cases. The current ratio is to be considered in the light of the results of other ratios, for example, that between merchandise and receivables. The conversion of merchandise into receivables increases the current ratio, but those receivables may be difficult to collect or they may be too large in comparison with the volume of merchandise. Hence other ratios condition the current ratio, that is, affect the degree of reliance to be placed on it.

The ratio of *net worth to debt* is derived by dividing the net worth, as accurately as it can be determined, by total debt, including current as well as funded debt. The result indicates the proportion between the capital owned by the firm in question and the capital borrowed by it. The pressure of debt is thereby revealed — the higher the ratio, the lighter is the debt burden.

Net worth to fixed assets, obtained by dividing net worth by the amount of fixed assets, indicates the proportion between the owned capital and funds not invested in current assets. A high ratio ordinarily indicates that the company is in a good position to meet the claims of creditors. The causes of an abnormally low ratio should be carefully investigated.

Merchandise to receivables is a ratio derived by dividing the inventory, at cost or less, by the total of accounts and notes receivable obtained in the course of trade. This ratio affects the current ratio since inventories are usually valued at cost or less and are converted

into receivables at selling prices, whereby a profit is added to the asset side in the form of receivables or cash which increases the current ratio. Whether a high ratio of merchandise to receivables is to be considered desirable depends, in part, on the phase of the business cycle or, more specifically, upon the trend of prices of the inventories, and, in part upon the probability of good collection on those receivables. If the market price for the raw material and finished goods inventories is rising, a relatively great volume must be considered a favorable factor. If the price trend for the goods which make up the inventories is downward, a relatively high volume of receivables, if collectible, will be considered as being more favorable than a high volume of inventories.

Sales to receivables is a ratio derived by dividing the net sales for a year by the total of the accounts and bills receivable obtained in the course of trade. The result indicates the total annual sales and the sales for which payments have not been received. A relatively large volume of sales and a low volume of receivables indicate good collections and, other things being equal, a position favorable to creditors. Whether the receivables have been sold or hypothecated should always be investigated; if the latter, the value of this ratio may be largely destroyed.

Sales to merchandise is a ratio derived by dividing the net annual sales by the total inventory of merchandise. The higher this ratio, the higher the merchandise turnover is likely to be. (This ratio does not yield an accurate figure for turnover because sales and merchandise inventory are figured on a different price basis.) A high turnover indicates highly salable merchandise and a smaller risk because of price fluctuations.

Sales to fixed assets is a ratio derived by dividing the net annual sales by the total amount of fixed assets. The result indicates the productivity of the fixed assets in terms of sales. A high ratio indicates a justification for the investment in those fixed assets, if they are properly valued. If the ratio is abnormally high or low, the evaluation of the fixed assets should be investigated.

Sales to net worth is a ratio derived by dividing the net annual sales by the net worth, and indicates the sales activity of the invested capital. An increase in this ratio from year to year is considered favorable to creditors unless it is the result of a decline in net worth rather than an increase in sales. Another shortcoming of this ratio

is that the management might be boosting sales volume with unprofitable business.

It is to be observed that many of the ratios mentioned may be quite meaningless or misleading when considered singly. A credit man who is experienced in the analysis of financial statements and in the interpretation of balance sheet and operating ratios knows the shortcomings of each ratio and how to check one against the other in order that each may be as meaningful as possible.

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CHAPTER XI

BANKS INVEST FUNDS

Traditional view of bank investments. — It has been said in an earlier chapter that the traditional concept of commercial banking, evolved in Europe in the seventeenth and eighteenth centuries, consists of the pooling of short-term funds and their diversion into short-term loans for commercial and productive purposes. Accordingly, a commercial bank's chief assets were held most properly to consist of commercial loans made in order that it might possess the most liquid type of assets to support its demand liabilities. The role which investments play in this concept of commercial banking is a comparatively minor one.

The history of American banking reveals the willingness of our commercial bankers to make compromises with the traditional view, while legislation has at times sought to support it and at other times encouraged departures from it.

Real estate loans secured by mortgages on agricultural and urban property constituted one of the most common evidences of departure from the traditional purposes of commercial banking in the earlier years of American banking history. More recently, the huge holdings of long-term bonds have become the clearest evidence of willingness to abandon truly commercial banking. Perhaps the necessities of particular situations furnish the explanation. Many banks, especially in the rural sections of the country in their developmental stages, could make few loans other than real estate loans. In recent years, commercial banks have defended their policies with the assertion that they cannot do otherwise than buy bonds since the demand for loans has fallen so low.

Exchanging bank deposits for bonds. — The argument against heavy investment of the funds of commercial banks in bonds may be briefly stated as follows. Demand deposits are subject to immediate withdrawal by depositors. When a bank makes numerous short-term loans of comparatively small amounts, it finds that some of them mature each day. These continuous maturities

ordinarily offset the constant withdrawals of depositors. If withdrawals happen to be quite large over a certain period of time, the bank can cope with the situation by reducing the dollar volume of renewals as compared with the dollar volume of maturities of the short-term loans. If withdrawals of deposits are inordinately high, the bank in question sells or pledges some of its "self-liquidating" paper to furnish a larger amount of cash income. It can, furthermore, under a central banking system, rediscount this paper with the central bank as a means of obtaining cash. On the other hand, a bank which has invested heavily in bonds must sell these bonds on the market to raise cash in times of need. While this method of escape may be open to an individual bank, it is likely to be a costly means of raising cash if all the banks resort to it at about the same time. Furthermore, an individual bank may find that some of its bonds furnish no means whatsoever of raising cash to meet the cash demands of depositors. The bonds referred to are those with only a local market; the only buyers might be depositors of the bank which seeks to sell them. Thus the selling bank merely trades bonds for deposits and raises thereby no cash to meet the demands of other depositors.

Let us now drop the assumption that the bonds in question can be sold only to depositors of the bank which offers them for sale. In this case the problem is to induce the public to accept bonds in place of currency or bank deposits. Whether this exchange can be made depends on the willingness of people to change their paying habits and their currency-holding habits. The degree of exchangeability of bank deposits for bonds depends on bond yields, their safety, the industrial outlook, etc. If these factors are favorable, the holders of bank deposits will buy bonds with checks drawn against their deposits. Obviously, the banking system as a whole cannot gain cash by this process. The process of exchanging bonds for deposits can succeed only if an individual bank wishes to make this exchange in one direction when other banks are willing to make the exchange in the other direction. If all, or most, banks desire to make the exchange in the same direction at the same time, the central bank must buy the bonds with currency or deposit credit, if drastic deflation of bond prices is to be avoided.

Past attempts to support the traditional concept. — In the period, or periods, of American banking history prior to the passage of the

National Bank Act of 1863, several states passed legislation which forbade the purchase of bonds by commercial banks. Perhaps the failure of the second Bank of the United States in 1841, after it had become a state bank chartered by the State of Pennsylvania, caused or hastened the passage of much of this legislation.

In some respects, the National Bank Act of 1863 encouraged bank investments in bonds and, in other respects, sought to support the traditional concept of commercial banking. It required newly organized national banks to invest a part of their funds in government bonds and required that government bonds be used as security for national bank notes, but it did not specifically grant authority to national banks to invest in bonds. This act permits the discount and negotiation of "promissory notes, drafts, bills of exchange, and other evidences of debt." It is not known whether the framers of it intended to forbid, by exclusion, bank investments in bonds. An interpretation of the words "other evidences of debt" was issued by the Comptroller of the Currency, whereby banks were permitted to invest in bonds without legislative authorization. Many states specifically forbid the purchase of stocks by banks, except stock of their safety-deposit subsidiaries and stock in the Federal Reserve bank of the district in which a bank may be located.

The National Bank Act of 1863 sought to limit the activities of national banks to commercial banking. It forbade their granting real estate loans (but was later revised to permit them) or establishing trust departments (also permitted later). Hence, the framers of this act probably intended to encourage national banks to invest in government bonds and to discourage their entrance into other non-commercial fields.

Specific authorization to purchase bonds. — The first specific legislative authorization given to national banks to buy bonds for investment was the act passed February 25, 1927, by which national banks were permitted to buy "bonds, notes, or debentures commonly known as investment securities, under such further definition of the term 'investment' securities as may by regulation be prescribed by the Comptroller of the Currency." The Comptroller issued, under this authority, a very broad definition of investment securities in which he stressed their marketability. "This term marketable," he said, "means that the security in question has such a market as to render

sales at intrinsic values readily possible." At the time this definition was first used, no method or suggestion of a method of determining intrinsic values was attempted.

Recent trend in bond holdings of banks. — The American Bankers Association has recently established a committee to study questions relating to banking trends and policies. The Economic Policy Commission, as this group is called, issued in September 1936 a study which shows the earning assets of all commercial banks classified at five-year intervals, according to the percentage placed in investments, in capital loans, and in commercial loans. These data are presented in Table 19. They show clearly the decline in

TABLE 19. PERCENTAGE DISTRIBUTION OF EARNING ASSETS OF ALL COMMERCIAL BANKS

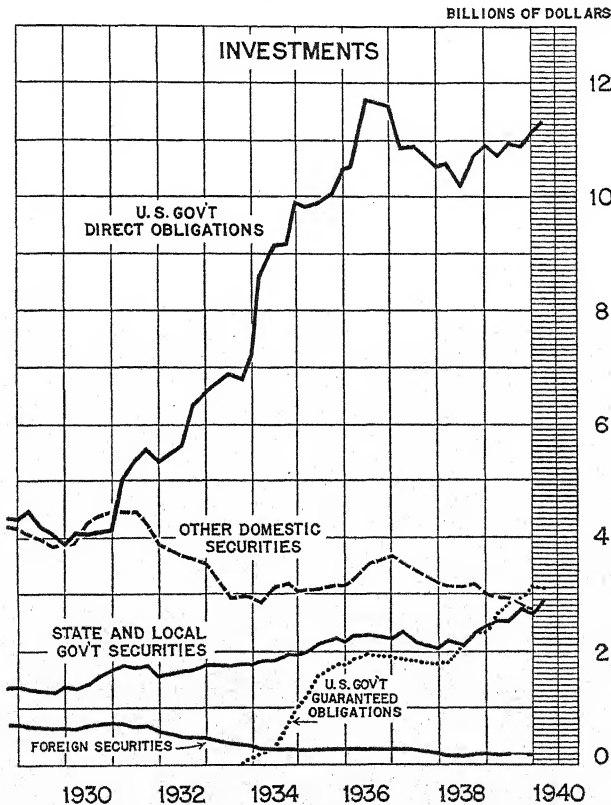
<i>Year</i>	<i>Investments</i>	<i>Capital loans</i>	<i>Commercial loans</i>
1900	22	29	49
1905	24	30	46
1910	23	36	41
1915	23	37	40
1920	23	26	51
1925	28	21	51
1930	28	35	37
1935	56	23	21
1936	60	21	19

Source: American Bankers Association, *Report of the Economic Policy Commission*, September 1936. San Francisco, California.

the commercial aspects of commercial banking and the growing significance of investments in the operation of banks. The growth of bank investments was especially great in the years from 1930 to 1936, but the decline in commercial loans became a most significant aspect of the banking situation in the United States in the period 1925-1930. A valid generalization is that the declining trend of the strictly commercial functions of banking in the United States has been a characteristic of the entire post-World War period. There have been changes in the emphasis placed upon different types of noncommercial loans throughout this postwar period. During the years from 1917 to 1919, bank investments in government obligations increased. After the war, until 1928, bank investments in government bonds decreased and their holdings of industrial bonds

increased. Then in 1928 and 1929, holdings of all classes of bonds decreased, while loans, many of them noncommercial, increased. For about a year following the stock-market crash, bank holdings of all kinds of bonds increased, but the numerous bank failures of 1931 to 1933 forced the banks to reduce both their loans and their bond holdings.

CHART 3. INVESTMENT OF MEMBER BANKS
CALL-REPORT DATES



Source: *Chart Book of the Board of Governors of the Federal Reserve System.*

The most significant change in commercial bank investments in the last two decades has been the shift away from corporate securities to government securities. Between 1921 and 1928, commercial banks bought an average of \$700,000,000 of corporate securities a year. During the next five years the total value of these investments held by commercial banks was much less than half the amount of

corporate securities held by them ten years earlier. The total amount of government securities, both direct and guaranteed by the United States Government, held by all commercial banks increased from about \$4,000,000,000 to about \$14,000,000,000 in the same period.

TABLE 20. CLASSIFICATION OF INVESTMENTS OF
MEMBER BANKS
(In thousands of dollars)

	1934 Dec. 31	1937 Dec. 31	1938 Dec. 31	1939 Dec. 30
United States Government direct obligations — Total . . .	9,905,692	10,574,143	10,882,288	11,184,105
Treasury bills	1,030,052	661,772	285,789	562,737
Treasury notes	4,217,091	4,277,041	3,388,961	2,223,277
Bonds maturing in 5 years or less	4,658,459	5,635,330	726,907	773,492
Bonds maturing in 5 to 10 years			2,453,098	3,017,960
Bonds maturing in 10 to 20 years			2,887,835	3,657,326
Bonds maturing after 20 years			1,139,698	949,403
Obligations guaranteed by United States Government — Total	989,208	1,797,407	2,340,243	3,113,960
<i>Total amount maturing in 5 years or less</i>			963,157	2,082,254
Reconstruction Finance Corporation	241,389	255,432	426,961	833,690
Home Owners' Loan Corporation	505,719	1,143,076	1,323,848	1,500,513
Federal Farm Mortgage Corporation	242,100	398,899	433,588	444,449
Other Government corporations and agencies			155,846	365,308
Obligations of Government corporations and agencies, not guaranteed by United States — Total	364,452	280,280	330,879	376,697
<i>Total amount maturing in 5 years or less</i>			222,049	280,063
Federal Land banks	136,015	150,106	106,440	94,977
Federal Intermediate Credit banks	117,280	130,174	126,864	154,365
Other Government corporations and agencies	111,148		97,575	127,355
Obligations of states and political subdivisions — Total . .	1,964,736	2,046,611	2,447,792	2,691,687
In default			9,373	7,022
Without specific maturity			149,374	172,253
Maturing in 5 years or less			1,478,409	1,645,951
Maturing after 5 years			810,636	867,361
Other bonds, notes, and debentures — Total	2,380,764	2,566,080	2,401,538	2,142,672
<i>Total amount in default</i>			89,239	72,237
<i>Total amount maturing in 5 years or less</i>			431,610	451,364
Railroads	792,983	885,643	786,594	731,149
Public utilities	714,803	794,471	766,456	604,513
Industrials	872,978	885,966	568,366	527,541
Other domestic corporations			97,934	93,015
Foreign — public and private			182,188	186,454
Corporate stocks — Total	517,323	529,411	459,990	439,477
Federal Reserve bank	146,553	132,637	134,494	135,546
Affiliates of reporting banks			104,148	100,069
Other domestic banks	370,770	396,774	23,430	20,369
Other domestic corporations			196,175	181,778
Foreign corporations			1,743	1,715

Source: *Member-Bank Call Report*, December 30, 1939, p. 3.

The substantial losses which banks sustained on their second-grade bonds in the years following the crash of the stock market in

1929 were largely responsible for the change in their investment practices. Many defaults and heavy depreciation in market values discouraged banks from buying corporate issues, except those of the very highest grades, and discouraged the flotation of new corporate capital issues.

Types of securities held by banks. — The wide variety of obligations now held by banks is best presented by the classification used by the member banks in reporting their holdings on call dates. Table 20 and Chart 3 present this classification and give the amount of each class held by member banks on selected dates from 1930 to 1939.

New regulations on investment securities held by banks. — Attention has been called to the fact that an act of Congress passed February 25, 1927 (the McFadden Act), permitted national banks to invest in "bonds, notes, or debentures commonly known as investment securities." This act empowered the Comptroller of the Currency to define the securities which national banks might hold and thus gave the Comptroller power to limit the investment holdings of national banks. The Comptroller did not effectively use the power given him. His annual reports, until recent years, indicate an appreciation of the loan problem of banks, but little is said about their investment problem.

Perhaps the relatively slight attention given to the investment problem by the Comptroller of the Currency is to be explained by the fact that there are forty-nine different banking systems in the United States. The Federal Reserve System was a unifying force, but its rules and regulations applied chiefly to loans and discounts. Very little authority was given the Federal Reserve Board to regulate bank investments. If such authority was implied in the Federal Reserve Act, it was not used to any great extent. The regulation of the investments of banks waited upon a greater general appreciation of the problem and the granting of more power to central control bodies to cope with it. An important step in the direction of centralized control over the investment problem was the passage of the Banking Act of 1933.

The Banking Act of 1933. — The Banking Act of 1933, designed largely to curtail the investment banking functions which commercial banks had assumed, applies to all the member banks of the Federal Reserve System, while any regulation which the Comp-

troller of the Currency might have promulgated under the authority of the McFadden Act could apply only to national banks. The regulations, restrictions, or prohibitions under the Banking Act of 1933 may be summarized as follows:

1. A member bank may not underwrite any issue of corporate investment securities, except under a permit from the Board of Governors of the Federal Reserve System to participate with securities dealers in syndicates for the handling of obligations of the United States Government, states, municipalities, and other political subdivisions, as well as obligations issued by authority of the Federal Farm Loan Act, or under the authority of the Federal Home Loan Corporation.

2. A member bank must not purchase securities of any one obligor to an amount in excess of 15 per cent of its capital and 25 per cent of its surplus. Exceptions are the same as in Rule 1.

3. A member bank must not invest in one security issue more than 10 per cent of that issue or 50 per cent of the bank's capital if the issue exceeds \$100,000. Exceptions are the same as in Rule 1.

4. To invest more than its capital and surplus in its premises requires the approval of the Comptroller of the Currency for national banks and the approval of the Board of Governors of the Federal Reserve System for state-chartered member banks.

Banking Act of 1935. — The Banking Act of 1935 changed some provisions of the Banking Act of 1933, since they proved to be more rigid than necessary to insure proper diversification among bank investments. Rules 2 and 3 above were supplanted by the following single rule: A national bank may purchase for its own account investment securities under such limitations as the Comptroller of the Currency may by regulation prescribe, but in no event may the total of the investment securities of any one maker or obligor held by the bank exceed at any time 10 per cent of its capital stock and surplus. The operation of this rule did not, however, require a bank to dispose of any securities lawfully held when the act went into effect. The exceptions noted in Rule 1 of the above summary of the Banking Act of 1933 were retained. Under this modification of the earlier act, a bank may purchase an entire bond issue if the total amount of securities held against the obligor does not exceed 10 per cent of the bank's capital and surplus. Since the law provided that state member banks were to be subject to the same limitations with respect to investment securities as national banks, the regulations issued by the Comptroller of the Currency automatically apply to all banks in the Federal Reserve System.

Regulations of the Comptroller of the Currency. — Under the powers granted him by the McFadden Act passed in 1927, the Banking Act of 1933, and the Banking Act of 1935, the Comptroller of the Currency sought, in his regulation of February 15, 1936, to define the "investment securities" which member banks are permitted to hold in their investment portfolios. One section of this regulation is devoted to a definition of marketable securities, as follows:

An obligation of indebtedness which may be purchased for its own account by a national bank or a State member bank of the Federal Reserve System, in order to come within the classification of "investment securities" within the meaning of the paragraph of Section 5136 above quoted, must be a marketable security as designated by the express language of said paragraph, and can be purchased for the bank's own account only under the limitations and restrictions provided in said paragraph and the provisions of these regulations.

Under ordinary circumstances the term "marketable" means that the security in question has such a market as to render sales at intrinsic values readily available.

In determining whether a given security is marketable, it must meet the following minimum requirements:

- (a) That the issue be of a sufficiently large total to make marketability possible;
- (b) (1) That a public distribution of the securities must have been provided for or made in a manner to protect or insure the marketability of the issue, or, in the alternative (2) other existing securities of the issuer have such a public distribution as to protect or insure the marketability of the issue under consideration, and such issue must be registered under the provisions of the "Securities Act of 1933" as amended, unless it is exempt from registration under Section 3 thereof.
- (c) That where the security is issued under a trust agreement, the agreement must provide for a trustee independent of the obligor, and such trustee must be a bank or trust company.¹

Particular attention is called to the statutory provision that the investment securities which may be purchased must be "in the form of bonds, notes, and/or debentures, commonly known as investment securities." If an obligation is in the form of a security, it must comply with these regulations regarding marketability as a condition of the bank's right to invest therein. Any such security which fails to comply with the law and these regulations, will not be deemed legally acquired, even though the bank considers the transaction as a loan rather than a purchase of "investment secur-

¹ See *Annual Report of the Board of Governors of the Federal Reserve System*, 1938, pp. 91-93.

ities," except where such security evidences real estate loans made pursuant to Section 24 of the Federal Reserve Act: (1) Where the obligations actually represent an initial loan by the bank, or (2) where the obligations were purchased pursuant to said section, in which case the bank is required thereby to purchase the entire issue.

In addition to this attempt to define marketability, the Comptroller issued several rules to govern bank investments, the most important being the following:

The purchase of "investment securities" in which the investment characteristics are distinctly or predominantly speculative, or "investment securities" of a lower designated standard than those which are distinctly or predominantly speculative, is prohibited. The purchase of securities which are in default, either as to principal or interest, is also prohibited.²

This regulation seems to be very cautiously worded in order to allow considerable discretion on the part of any banker regarding securities he might purchase as an investment for his bank. A very important footnote is, however, a part of the regulation. This footnote, which has provoked much criticism, reads as follows:

The terms employed herein may be found in recognized rating manuals, and where there is doubt as to the eligibility of a security for purchase, such eligibility must be supported by not less than two rating manuals.³

Other regulations were laid down at the same time, one of which prohibits a bank from participating as a principal in the marketing of securities; another requires a bank which purchases an investment security above par to set up a reserve to amortize the premium; still another prohibits the purchase of securities convertible into stock at the option of the issuer.

Defense of the use of rating manuals. — The rating manuals to which the footnote to the Comptroller's regulations refers are doubtless Moody's, Poor's, Standard Statistics', and Fitch's. These rating agencies are not under any government regulation and no one of them asserts that it can clearly define those bonds which are "predominantly speculative," yet official recognition was given them in the Comptroller's regulations. So much confusion of thought

² Quoted in Wilkinson, J. Harvie, Jr., *Investment Policies for Commercial Banks*, p. 108, New York: Harper & Brothers, 1938.

³ *Ibid.*, p. 110.

among bankers existed concerning the use of these rating manuals that the Comptroller felt compelled to make a statement concerning his regulations. In an address at Sacramento, California, on May 22, 1936, he said in part:

Inquiry has been made as to whether member banks are confined to the purchase of securities which have a rating classification in one of the four groups according to rating services. The responsibility for proper investment of bank funds, now, as in the past, rests with the directors of the institution, and there has been and is no intention on the part of this office to delegate this responsibility to the rating services, or in any way to intimate that this responsibility may be considered as having been fully performed by the mere ascertaining that a particular security falls within a particular rating classification.⁴

An explanation of the purpose of the reference to rating manuals in his regulations follows:

Reference to the rating manuals was made in the regulation in recognition of the fact that many banking institutions, by reason of lack of experienced personnel and access to original sources, are unable personally to investigate the background, history, and prospects of a particular issuer of securities, and consequently must rely to some extent upon such information as has been compiled by various rating services in their large rating manuals. It may also be expected that banking institutions will desire to supplement their own judgment by checking it against the opinion of others, including ratings that have been given by rating services. Such ratings, however, regardless of whether or not they are in the first four groups, are not conclusive on the question of eligibility. It is recognized that some securities, which are entirely eligible from a non-speculative standpoint at the time they are available for purchase, may have as yet received no rating by the rating services. It is also recognized that a security with a high rating according to the services may, in the circumstances of a particular case, be an undesirable investment, whereas on the other hand, conditions existing at the time of investment may make a security entirely eligible, notwithstanding the fact that it has a comparatively low rating according to the standard rating services. In the latter type of case, of course, there will be a correspondingly greater burden upon the bank to satisfy the examiners that a particular security is in fact eligible from a non-speculative standpoint.⁵

This language, it is to be noted, is much more moderate than the language of the regulation to which it refers, since the regulation states specifically that "such eligibility must be supported by not less than two rating manuals." As a further defense of the regulation, the Comptroller, in the same address, quoted from a study

⁴ *Ibid.*, p. 109.

⁵ *Ibid.*, p. 110.

published in May 1935, by the Commission on Banking Law and Practice of the Association of Reserve City Bankers, as follows:

It may be of interest at this point to present a few simple facts which were revealed by a detailed analysis of the assets of failed banks. Of the banks failing in 1931, 105 were picked at random from all sections of the country, and the 50 bonds contributing the greatest depreciation to the portfolios of the 105 banks were listed and tabulated. The two bonds which contributed the greatest depreciation to the portfolios of this group were convertible bonds which had been bought at prices substantially above par. In other words they were speculations. There were several other convertible bonds in the list which also caused heavy losses. Of the first 50 bonds in point of depreciation, only five had ratings of the first three grades in 1929; four of these five were convertible issues in which the banks' losses were due to having bought them at too high a price. The remainder of the issues were of the fourth grade or lower. These banks were sacrificing security for high yield. Only four of the 50 issues were brought out before 1923 and 42 per cent of them were brought out in 1928 or later. In other words, the bonds causing the greatest amount of depreciation were unseasoned issues, largely the product of boom conditions in the bond market.⁶

Criticisms of the use of rating manuals. — A lucid criticism of the use of rating manuals in selecting bonds for bank portfolios is contained in a study made by J. Harvie Wilkinson, Jr., of the State-Planters' Bank and Trust Company, Richmond, Virginia. The following excerpts from this study reveal the attitudes of a practical banker on this question:⁷

The fallacy of ratings being determinative in the matter of ascertaining whether a bond is an investment or not . . . is that ratings being based as they are on *past* facts and on arbitrary weightings of different factors, can themselves do no more than merely reflect the past. It is interesting to observe how closely the ratings follow the price of the bond — low price, low rating, high price, high rating.

By the use of rating standards one would always buy bonds at the wrong time. Bonds would be ineligible for purchase when they were low in price, and eligible for purchase only when they were high in price.

The regulation will actually work somewhat along the following lines. If it may be assumed that the current business improvement will continue and that it will reach a point where it will begin to absorb the excess credit supply, the first effect will be to help materially the prices of "business improvement" bonds which may not in many instances be now "eligible" for purchase. This

⁶ Quoted in Wilkinson, J. Harvie, Jr., *Investment Policies for Commercial Banks*, p. 111, New York: Harper & Brothers, 1938.

⁷ *Ibid.*, pp. 114-117.

type of issue as it rises in price will probably be refunded while interest rates are low and, as business improves, the rating on these securities will be raised although their inherent characteristics, *insofar as their vulnerability to the next depression is concerned*, have not been changed. Banks, particularly small banks, which are constantly under the steadily increasing pressure of seeking income, are drifting and will drift into this type of bond. The Comptroller's regulation will not stop the purchase of the type of bonds he really has in mind. The regulation will bring about their purchase *at the wrong point* in the interest cycle and *at the wrong point* in the business cycle.

When business has continued its improvement, possibly to the point of again acquiring feverish characteristics, the next step will be for interest rates to begin eventually to tighten. This will bring about a decline in the price of "money bonds" which the banks will hold in quantity because they now have the highest rating. The result will be: a decrease in the market value of the bank's portfolio. If a business depression recurs — although its degree is the main concern — then "business improvement" bonds will also begin to reflect their vulnerability by a decline in market price. The result in this case will again be: a decrease in the market value of the bank's portfolio. Both types of bonds will have been purchased at the wrong time and with no restrictions as to aggregate amounts.⁸

Revision in the Investment Securities Regulation of the Comptroller of the Currency. — The business recession which reached very serious proportions in the latter half of 1937 and which continued into the next year, brought about a demand for the retraction of the 1936 policies of the Board of Governors which were designed to restrict credit expansion. In the spring of 1938, the Secretary of the Treasury initiated a series of conferences with representatives of the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency, and the Board of Governors of the Federal Reserve System

... for the purpose of reviewing the policies and regulations of the Federal supervisory authorities and determining wherein they might be improved and better coordinated in furtherance of this objective, consistent with sound banking principles.

As a result of these conferences, unanimous agreement was reached on a program which for the first time brings uniformity in the treatment of loans and securities by the Federal agencies in their administration of bank examinations. . . . Included in the program is a broad revision of the Regulation of the Comptroller of the Currency governing bank investment policy.⁹

⁸ For another severe criticism of rating agencies as guides to bank investment policy, see Palyi, Melchior, "Bank Portfolios and the Control of the Capital Market," *Journal of Business*, January 1938, pp. 70-112. The University of Chicago Press.

⁹ *Federal Reserve Bulletin*, July 1938, p. 563.

No reference to "two rating manuals" appears in these new regulations, which supersede prior regulations concerning "investment securities." Furthermore, the new regulation does not necessarily require that the securities bought by banks be offered for public distribution, nor does it require that they must be readily marketable. They must not, however, mature later than ten years after issuance, and 75 per cent of the principal must be amortized by maturity through periodic payments, none of which would be required during the first year. Parts of the text of the revised regulations concerning bank investments (issued on June 27, 1938), together with some explanations, are reproduced below:

... the revised examination procedure recognizes the principle that bank investments should be considered in the light of inherent soundness rather than on a basis of day-to-day market fluctuations. It is based on the view that the soundness of the banking system depends in the last analysis upon the soundness of the country's business and industrial enterprises, and should not be measured by the precarious yardstick of current market quotations which often reflect speculative and not true appraisals of intrinsic worth.

The revised procedure broadly divides securities into those of investment character and those of speculative character. The former will be listed in Group I, the latter in Group II. Defaulted bonds will be listed in Group III and stocks in Group IV.

It is estimated that approximately 90 per cent of the total securities held by the banks are in Group I. In conformity with the principle of measuring such securities by investment and not by fluctuating market standards, daily quotations will not be taken into account in examination reports, in which such securities will be shown at their book value, whether they be listed securities or unlisted securities. Where book value includes a premium, the premium must be properly amortized. By severing appraisal of bank investments from current market quotations, it is believed that the banks will be encouraged to purchase securities of sound business and industrial concerns, whether large or small, for their true worth and not for speculative gains.

Securities in Group II are estimated to comprise not more than 5 per cent of the banks' holdings, and will be shown in examination reports at their average market price for 18 months just preceding the examination. Securities in this group which are not traded in and for which quotations are not available will be shown at estimated value.

In the case of Group III and IV securities, net depreciation will continue to be classified as loss.¹⁰

The appraisal of bonds in bank examinations. — The present regulations concerning the appraisal of bonds are as follows:

¹⁰ *Federal Reserve Bulletin*, July 1938, pp. 563-564.

Neither appreciation nor depreciation in Group I securities will be shown in the report. Neither will be taken into account in figuring net sound capital of the bank.

Group I securities are marketable obligations in which the investment characteristics are not distinctly or predominantly speculative. This group includes general market obligations in the four highest grades and unrated securities of equivalent value.

The securities in Group II will be valued at the average market price for eighteen months just preceding examination and 50 per cent of the net depreciation will be deducted in computing the net sound capital.

Group II securities are those in which the investment characteristics are distinctly or predominantly speculative. This group includes general market obligations in grades below the four highest, and unrated securities of equivalent value.

Present practice will be continued under which net depreciation in the securities in Group III and Group IV are classified as loss.

Group III securities: Securities in default.

Group IV securities: Stocks.

Present practice will be continued under which premiums on securities purchased at a premium must be amortized.

Present practice of listing all securities and showing their book value will be continued.¹¹

Some advantages of the revised regulations. — Before the revised regulations were promulgated, securities were valued on the basis of current market prices while other assets of banks were valued on the basis of examiners' appraisals. The result of this procedure was that bank assets in the form of securities were subjected to substantial changes from one examination to another, while other assets were not subjected to such severe fluctuations in the values at which they were permitted to be carried on the banks' books.

Under the revised regulations, Group I securities (high-grade securities) are valued at cost. If they are purchased at prices above par, the premiums must be amortized over the life of the securities. Profits from the sales of securities are isolated in reserves available for use in taking losses until losses have been written off and adequate reserves established. The procedures discourage a trading attitude toward bank-investment portfolios.

The procedures now in effect remove some of the injustices which formerly prevailed in the valuation of securities not of investment grade (now classified as Group II securities). Under the earlier

¹¹ *Annual Report of the Board of Governors of the Federal Reserve System*, 1938, pp. 89-90.

procedures, one bank might be examined at a time when the prices of these securities happened to be high while another bank might have the misfortune to be submitted to examination when market prices were low. The present regulations average the prices of speculative bonds over an eighteen months' period, thereby reducing such discrimination substantially. A further advantage of valuing these securities on the basis of average prices for a period of eighteen months is that bank examiners tend to value these obligations at prices above the market when that market is declining and at prices below the market when they are rising. The banks will, as a consequence, be encouraged to hold these securities when the market is under pressure and to sell them when there is an active demand for them. "This procedure," in the opinion of the Federal Deposit Insurance Corporation, "contributes not only to an improvement in the banks' position but to stability of the markets as well."¹²

Advantages of bond holdings. — Apart from the question of how large a proportion of bank assets should be in the form of investment securities, it must be admitted that certain advantages accrue to a bank from a well-diversified bond portfolio. Among these advantages, the most important are those which center around the use of bonds as (1) a secondary reserve, (2) collateral for advances to the banks owning them, and (3) a means of employing bank funds which would otherwise lie idle.

Bonds as secondary reserves. — The *primary reserve* of a bank consists of its deposits with the Federal Reserve bank, legal reserve, its cash in vault, and its balances at its correspondent institutions. The *secondary reserve* of a bank consists of those assets of a bank which may be converted into primary reserve funds with little or no loss. The size of the secondary reserve which is needed by a bank depends largely upon (1) the nature of its deposits, (2) the condition of its loans and discounts, (3) the size and nature of its capital account, and (4) the general business outlook.

An example of the significance of each of these factors follows: (1) A bank holding large deposits for other banks and possessing at the same time relatively small savings deposits needs a larger ratio of secondary reserves to total assets than a bank which possesses few deposits for other banks and a larger number and volume

¹² *Annual Report of the Federal Deposit Insurance Corporation, 1938, p. 67.*

of savings deposits. (2) A bank which has the preponderance of its loans in advances to borrowers in one industry or field of business enterprise needs a larger secondary reserve ratio than a bank with a well-diversified loan portfolio. (3) A bank with a high ratio of deposits to capital funds needs a greater secondary reserve ratio than one with a low ratio between these two items. (4) When the prosperity phase of a business cycle seems to be degenerating into a speculative boom, a bank needs a higher secondary reserve ratio and more cash in vault than it does at the beginning of the recovery phase of the business cycle.

Once a bank has determined the size of its secondary reserves and assuming that it possesses some short-term, open-market paper, such as prime commercial paper and bankers' acceptances, which of its bonds shall it regard as a part of its secondary reserve? Obviously, not all the bonds now held by banks need be considered secondary reserves, since the total amount they hold at the present time exceeds all reasonable secondary reserve requirements of this type.

In attempting to differentiate between those industrial bonds which may properly be regarded as secondary reserves and others which cannot be so regarded, J. Harvie Wilkinson, Jr., makes a distinction between a secondary reserve and a *bond investment account*. He says:

The distinction between a secondary reserve and a bond investment account is vital and the function to be performed by each hinges upon this distinction. . . . If, then, the outstanding characteristic of the secondary reserve is that it be available for transition into primary reserve without other than an inconsequential loss, it logically follows that only prime securities with short maturities — not more than four years — are eligible for such an account. The bond investment account includes all of those securities held by banks in their portfolios which have maturity dates in excess of four years.¹³

Are securities with short maturities properly to be considered secondary reserves in the event that losses are suffered on long-term bonds? Wilkinson's analysis favors this viewpoint, yet he admits the great probability of more than inconsequential losses on securities with short maturities, as revealed in the following quotations:

It should be pointed out that there is a great fallacy in the feeling that because a bond has a nearby maturity date it will automatically qualify for the second-

¹³ Wilkinson, *op. cit.*, p. 13.

ary reserve. A classical example is the Chicago, Rock Island, and Pacific 4% issue due in 1934, which in 1930 and 1931 was selling at 99½. In 1933, two years later, the market price ranged from a high of 39 to a low of 16. The road had filed a petition under Section 77 of the Federal Bankruptcy Act of June 7, 1933. There were, however, professional buyers purchasing Chicago, Rock Island, and Pacific 4's in 1930 and 1931. These bonds were purchased in the amount of \$556,000 by the life, fire, and casualty insurance companies in 1930 and in the amount of \$675,000 by the same buyers in 1931. Many of these purchasers may not have been employing them as secondary reserves. How much worse it was to have been using them for that purpose. And yet they qualified insofar as their maturity was concerned!

Another illustration is to be found in the Middle West Utility Company 5% notes which were due serially, some of the maturities to be paid in 1932 and 1933. As late as 1931 the 1932 maturities were quoted at 100¾ and the 1933 maturities at 99¾. The collapse in the structure culminated with the appointment of Receivers on April 15, 1932. Here again the fallacy of a short maturity is evident. These are not isolated cases — rather are they representative of the pitfalls into which one may well drop if too great weight is attached to the mere matter of maturity. It cannot too often be repeated that quality is the *sine qua non* of a bond designed to perform the function of a secondary reserve.¹⁴

Thus we are forced to conclude that the solution to a bank's investment problem cannot be found in an absolute reliance upon a proper distribution of the maturities of its investments.

Do government securities serve satisfactorily as secondary reserves for commercial banks? There would seem to be little cause for controversy over the adequacy of the short-term government securities as secondary reserves since they are not likely to be thrown on the market in large quantities. In the case of the longer-term government bonds, it may be argued that they are subject to price fluctuations resulting from changes in the interest rate, and for that reason are unsatisfactory as a secondary reserve for commercial banks. However, the fact that government bonds can ordinarily be sold in the open market with little or no loss qualifies them as a secondary reserve. In addition to the willingness of the open market to absorb them readily, government bonds are accepted at par as collateral for member-bank loans from the Federal Reserve banks. Although it must be admitted that a general liquidation of government bonds would have grave consequences, as would a similar development concerning any other type of securities, the price behavior of government securities in

¹⁴ Wilkinson, *op. cit.*, pp. 16-17.

recent years furnishes little or no reason for excluding them from a secondary-reserve classification among the assets of commercial banks.

The use of bonds as collateral for bank loans. — The framers of the Federal Reserve Act were determined that Federal Reserve funds should not be advanced to member banks to be employed by them for investment and speculative purposes. One of the most apparent evidences of this attitude is found in their failure to provide any method whereby a member bank might procure advances from a Federal Reserve bank other than by the rediscounting of commercial paper, although the traditional method of reserve city banks in making advances to their correspondent banks was to accept a promissory note from any such correspondent collateralized by securities or customers' notes receivable.

On September 7, 1916, an amendment to the Federal Reserve Act was adopted whereby a Federal Reserve bank might make advances to a member bank on the latter's promissory note if such note was secured by (1) paper eligible for rediscount, (2) paper eligible for purchase in the open market, or (3) United States government obligations. These advances could be made for fifteen days or less and at rates to be announced by each Federal Reserve bank, subject to review and determination by the Federal Reserve Board.

After the entrance of the United States into the World War, member-bank indebtedness to the Federal Reserve banks was secured largely by government obligations. Thus the first move toward making Federal Reserve funds available for supporting the investment holdings of member banks was taken. A further step in this direction was the passage of the Glass-Steagall Act of 1932. This act provided that Federal Reserve banks, with the approval of the Federal Reserve Board, might make advances of funds to a group of member banks for distribution to such banks within the group as were in need of funds. This method was probably inspired by the older policy of clearing-house associations making advances to members in need of funds to save them from possible involuntary suspension during periods of extreme financial stress and strain. These were frequently joint loans upon security determined by the clearing house association. The Glass-Steagall Act allowed the Federal Reserve banks to accept security other than rediscountable paper, for the obvious reason that at the time this

act was passed member banks possessed very little paper eligible for rediscount.

The Emergency Banking Act of 1933 permitted the Federal Reserve banks to make short-term loans to member banks on any satisfactory asset. Advances of this type were quite common in Europe long before our Federal Reserve banks were permitted to accept them. They have often been referred to as "Lombard loans." Under the banking acts of the United States in 1933 and 1935, these short-term advances can be made without penalty rates of discount if the member-banks' notes are secured by United States bonds, United States certificates of indebtedness, Federal farm mortgage bonds, Federal home loan securities, and the obligations of the Federal Intermediate Credit Banks.

The Banking Act of 1935 liberalized these loans by Federal Reserve banks to member banks still more by allowing maturities as long as four months on advances "secured to the satisfaction of the Federal Reserve bank" which makes them. The rate on these advances, however, must be at least $\frac{1}{2}$ of 1 per cent higher than the highest rediscount rate in effect at the lending bank.

Bonds diversify bank assets. — Banks generally regard the placement of their funds in bonds as secondary to the legitimate claims of their customers for credit accommodation. These claims of customers, however, are not constant. They vary greatly from season to season and from one point in the business cycle to another. During periods when the demands of its customers for funds are scant, a bank finds bonds to be a convenient medium for the employment of its otherwise idle funds. The bonds which it buys during the periods of decline in the volume of loans to customers may be new issues or purchases of old issues from individual investors, from the Federal Reserve banks, or from other banks who may, at the time, be expanding their loans to customers.

The investment policies of banks differ greatly in several respects. While one bank may be reluctant to expand its loans to customers if it is necessary to reduce its bond holdings in order to do so, another may hastily take advantage of this opportunity. While one bank may adopt a "trading attitude" toward its bond account, another may, in the great majority of cases, hold its bonds until maturity. In general, the Federal Reserve authorities and other governing agencies are discouraging the trading attitude

toward bond accounts. A partial abandonment of the trading attitude and the realization of the fact that banks are likely to continue to hold a very large percentage of their assets in the form of bonds are two considerations which magnify the importance of a proper diversification of risks within the bond portfolios of banks.

The bond department. — The growing importance of bonds among the various types of bank assets has, at the same time, increased the importance of the bond department, or the several departments of a bank responsible for the purchase and sale, the custody of and accounting for, the bonds which are handled by the bank. These bonds may be purchased for the bank's own account, for its customers, or for its correspondent banks. They may be bought directly from the issuer, through a member of the New York Stock Exchange or other exchange, from correspondent banks, or in the "over-the-counter market" from brokers operating therein.

The service which a bank performs for its customers or correspondent banks is often rendered without a fee other than such amounts as the bank has paid to brokers or other dealers. The reason for this gratuitous service is doubtless to be found in the desire of correspondent banks to expand the operations of their bond departments through the purchase by customers of the bonds they have on hand.

Many banks in the financial centers act as *registrars* for stocks and bonds and as *transfer agents* for stocks. One of the regulations of all organized stock exchanges is that all listed securities be registered with some duly appointed registrar who is to keep a record of the holders of those securities. The same exchanges also require that each corporation whose securities are listed appoint a transfer agent who performs the duty of transferring the stocks of a corporation. A bank may be a transfer agent for one corporation and registrar for another, but it cannot serve in both capacities for the same corporation. The reason for this regulation is that the registrar acts as a check upon the transfer agent to avoid errors and irregularities. A corporation may serve as the transfer agent for its own shares, but it cannot act as its own registrar, since the purpose of an independent registrar is to provide against the issuance of more than the authorized amount of securities. This amount is

specified at the time the registrar is appointed. The usual arrangement between a bank which serves as registrar or transfer agent and the corporation which issues the securities is that the corporation is to pay a fixed aggregate sum for the performance of these services.

Some states require that the corporations maintain *paying agents* within the chartering state. Some stock exchanges also require that such agent be maintained in the city of the exchange. Banks act in this fiscal capacity for corporations and handle funds to meet interest payments on bonds, to meet principal payments on maturing bond issues, etc. The banks acting in this capacity receive a commission for this service and sometimes have the use of funds deposited with them for a short time before payments are to be made.

The principal fiduciary functions which banks perform are those carried out by their trust department, the operations of which are discussed in a later chapter. These trust departments include in their organization *security analysis* and *investment reviewing* divisions, whose operations, obviously, are essential to the performance of fiduciary services. The brief reference to the bond department which is included in this chapter is intended merely to call attention to the fact that commercial departments of banks today require greater services from their bond departments than ever before, because of the growing proportion of investment securities to the total assets of commercial banks.

Summary. — The analysis of the investment problem of commercial banks which has been presented in this chapter reveals the practical limitations of the theory that demand liabilities should be supported exclusively by short-term commercial loans. The evidences of this development appeared before the advent of the New Deal; several important studies have shown that the expansion of bank credit since the war has been based upon loans on stocks, bonds, and real estate.¹⁵ Another evidence is the decrease in rediscountable paper by 1935 to about one-fourth of its 1923 volume. In addition, as has previously been pointed out, the proceeds of many loans classified as commercial loans are used for noncommercial purposes.

¹⁵ Willis, Henry Parker, *The Theory and Practice of Central Banking*, pp. 118-132. New York: Harper & Brothers, 1936.

The causes of the changing character of bank assets are probably to be found in the adoption of new methods of financing by American business firms which, in turn, may be attributed to the transition of the American economy from a developmental stage to a state of financial maturity.

An important deviation from older principles was that contained in the Banking Act of 1935, which permitted member banks to obtain advances from the Federal Reserve banks on their own notes "secured to the satisfaction of the Federal Reserve Bank." This action and a recognition of the fact that the stability of the banking system became dependent on the stability of bond values have led to the new policy of bank examinations which has been outlined.

A reasonable interpretation of the present examination procedure is that the Federal Reserve banks have assumed the burden of protecting the member banks against the danger of insolvency attributable to short-term fluctuations in the prices of their Group I and Group II investments. It should be remembered that neither depreciation nor appreciation of Group I investments will be considered in computing net sound capital, while the average market price of Group II investments for 18 months preceding examination will be used in computing net sound capital. (In the case of Group II investments, 50 per cent of net depreciation is deducted in arriving at net sound capital.)

If the banker uses such poor judgment that the bonds in his bank's portfolio slump from Group I to Group II and then to Group III (securities in default), the Federal Reserve bank can offer no help. Assuming, however, that a bank keeps most of its bonds in the Group I category, its investments can be said to be liquid in so far as the Reserve bank will advance funds to the member bank on the security of these bonds.

Thus the better grades of bonds, as well as rediscountable short-term paper, may be shifted to the Federal Reserve banks to supply the member banks with funds to maintain the redeemability of their demand liabilities. Since this question is closely related to that of bank reserves, further analysis of the liquidity and shiftability of bank assets is undertaken in the following chapter.

SUGGESTIONS FOR FURTHER READING

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CHAPTER XII

BANKS PREPARE TO PAY CLAIMS

Introduction. — Attention has already been called to the distinction between (1) the primary reserve of a bank, consisting of lawful money and balances at other banks, and (2) its secondary reserves, consisting of bonds and other items, which it can convert into cash on short notice with little or no loss. The problem of secondary reserves has been considered in the preceding chapter. Some further discussion of the nature of bank reserves in general is, however, necessary at this point to make possible a better understanding of the commercial banking process and to provide a better background for later discussions of the control of the money markets.

The old concept of bank reserves. — A concept of the bank reserve which may now be regarded as primitive, or at least very inadequate, considered reserves as consisting solely of a sum of cash that may be used to meet the demands of depositors. This concept is closely allied to the bank's function of safekeeping funds; the difference is one of amount only, that is, the reserve of a bank is somewhat less than the amount of money deposited with it. This "sum of money" theory of the bank reserve is embodied in much American banking legislation.

If this concept of the bank reserve were valid under modern conditions, reserves would consist of vault cash and of deposits of cash at the Federal Reserve banks where it is held in reserve for the member banks. At the present time, however, the total of vault cash held by all commercial banks and the Federal Reserve banks is very small, while the total reserves of the banks of the United States are enormous. It is apparent, therefore, that the reserves of the member banks and the Federal Reserve banks in their present form are not cash (currency) and that the old concept which regards them as such is inadequate.

Later theories. — Henry Parker Willis pointed out how recent discussions of the nature of the bank reserve have discredited the older and more elementary notion as follows:

It [the recent concept] now recognizes that the bank's reserves, in the true sense, may be anything that will enable it to meet the obligations for which it was intended to provide. It may, therefore, consider as reserve the credit with other banks (as is permitted in the National Bank Act) or, looking at the reserve question more abstractly, we may think of reserves as the measure of the liquid position of the bank itself, the degree of its liquidity, the situation in which it has placed itself, with a view to meeting its obligations when they are due. Analysis of the whole idea of balancing bank assets against liabilities soon shows that what is sought by the carefully managed bank is to arrange its assets and liabilities in such relative fashion that the assets may be constantly relied upon to provide a resource from which the liabilities may be met. *A reserve policy thus becomes a policy of asset management* which will maintain a satisfactory balance between liabilities and assets of differing maturities, adjusting asset maturities to liability maturities¹ (Italics not in original).

The conclusion reached by Willis, after a lengthy discussion of the nature of bank reserves, is as follows:

... the holding of reserves, today, takes form as the supervision of bank credit and the maintenance of its liquidity. Such liquidity is tested by the ability to cancel, that is to say, by the capacity of those who have liabilities outstanding to meet the claims presented to them by the presentation of claims upon others. ... The successful "holding of reserves" by the central bank is thus equivalent to a constant and careful study of credit and the maintenance of arrangements for the cancellation of its various paper forms.²

THE RESERVE OF THE INDIVIDUAL BANK

The discussion of the nature of the bank reserve contained in the above quotations does not deny that till money is a part of the primary reserves of an individual bank. We shall, therefore, discuss first some considerations which determine the amount of the primary reserve of an individual bank and then proceed to a discussion of some aspects of the reserve problem from the standpoint of the functioning of the banking system as a whole.

That part of the primary reserve of a bank which is kept in the bank itself is ordinarily referred to as till money or cash in vault, and is used to meet the ordinary demands of depositors. The

¹ Willis, Henry Parker, *The Theory and Practice of Commercial Banking*, p. 266. New York: Harper & Brothers, 1936.

² *Ibid.*, p. 281.

amounts kept with other banks, which also constitute a part of the primary reserve of a bank, are sometimes larger than the till money and cash in vault and sometimes smaller, depending on the habits of a bank's customers, geographical factors, etc. There exists no formula by which these amounts can be determined. Each bank must, by experience, work out this problem for itself. In general, a bank with relatively few depositors, or a few very large depositors, should expect to keep more cash in its vault than a bank with a large number of depositors with deposits more nearly equal in size. Another consideration is the adequacy and ease of liquidation of a bank's secondary reserve. A bank with good secondary reserves might logically keep smaller primary reserves than another bank less well protected in this respect. A bank in an agricultural community should expect to encounter heavier withdrawals at a different season than a bank which serves a large number of industrial depositors.

The relative unimportance of primary reserves. — An analysis of the financial statement of almost any commercial bank reveals the fact that its primary reserves are wholly inadequate to meet more than the normal claims of its depositors. Far more important, when claims greater than the normal amount are presented, is the liquidating value of the other assets of the bank. If this fact is fully appreciated, the consideration given to the loans and discounts and to the investments of a bank in previous chapters must carry over into a discussion of a bank's reserve position.

In order to reveal the significance of this assertion, let us assume that a government decides to create a certain amount of standard money and that it distributes this money among the number of banks it permits to be established, in accordance with some preconceived formula of distribution. This standard money is, of course, assumed to be acceptable to those who may make claims upon these banks. Each bank extends credit to its customers and invests funds in open-market instruments. Each accumulates assets and liabilities many times the amount of the standard money allotted to it. The important question to those who have claims against one of these banks concerns the ability of that bank to collect its claims (assets) against others. Since this is true for one bank, it must be true for each of the others, leaving us with the conclusion that all these claims must somehow cancel. If they do

not, a bank that possesses standard money in an amount less than the excess of claims against it over its claims against others will encounter grave difficulties.

Reserve management of the individual bank. — From what has been said it is clear that the reserve problem of an individual bank requires the management of its assets in a manner which will enable it to meet its obligations as they are presented. It meets this problem by observing the variations which occur in its business and seeing to it that it possesses assets of various form which either mature or can be shifted to others as its liabilities are likely to be offered for redemption. For our present purposes, bank assets may be classified as (1) cash on hand, (2) deposits with other banks which are subject to withdrawal, (3) paper which can be rediscounted with the Federal Reserve bank or used as collateral for an advance from a correspondent bank, (4) other short-term paper, some of which is maturing daily or at regular intervals, and (5) long-term assets, such as bonds, which can be readily shifted to other parts of the economic system.

When a bank finds itself in a position wherein it cannot meet the claims against it by selling, withdrawing, or pledging its claims against others, it must resort to some source of creation of standard money or other money that is acceptable to its claimants. This source is the central bank which is given power to issue legal tender notes. In other words, the problem of meeting these claims against the member bank is shifted to the central bank. The alternative is the failure of the member bank and the liquidation of its assets at whatever price they may command in the market.

THE RESERVE OF THE RESERVE BANK

Continuing with our previous assumption, let us now say that the government requires each bank to which standard money has been allotted to deposit a certain percentage of it as a reserve with a central reserve bank. Obviously, this procedure would not increase the total reserves of the whole banking system and make that total more adequate to meet the claims against the banks of the system unless the central bank had means of creating, or receiving from abroad, more standard money. In the absence of such power, or the use of such power, the importance of the volume of the standard money must be secondary to other considerations.

These other considerations begin with the fact that the amount of reserves required of the individual bank is not a percentage of its standard money, but rather a percentage of its deposit liabilities. Nor is this deposited legal reserve necessarily in the form of standard money; its form at present is a credit balance with a Federal Reserve bank. We must, therefore, drop our assumption that reserve balances with a central reserve bank consist of standard money.

The reserve balances of the member banks are deposit liabilities of the central reserve bank which the central bank must be prepared to meet on demand. So long as each member bank is a going concern the central bank can, by force of law, demand that the member banks keep this reserve account with the central bank above a certain minimum. When any member bank fails, however, its reserve balance with the central bank must be paid in full by the central bank. For this reason, the central bank must be prepared to meet the claims of the member banks against it.

In the absence of the power to create new money, the central bank is forced to meet the claims against it with the proceeds of the sale of the assets in its possession. These assets are mostly short-term paper, government securities, and some standard money. The short-term paper in its possession may be, in large part, that paper which has been rediscounted by it for the member banks. In general, the central bank and the member banks hold the same types of earning assets. Our previous conclusion that the protection given the creditors of the individual banks is chiefly the liquidating value of its earning assets and in smaller measure the standard money it holds, applies, therefore, with equal validity to the central bank if it does not have the power to create new money.

As a matter of fact, however, the central bank is not ordinarily forced to rely on the amount of standard money in its possession or on the sale of its assets to meet the claims against it. The sale of its assets would not give the whole banking system more funds because such transactions merely shift those assets from one part of the system to another. Instead, the central bank is a source of funds; within broad limits, it can create money to meet the demand of the member banks against it. In other words, it can within these limits, increase its note liabilities and increase its assets at the same time by exchanging its notes for the bonds or cus-

tomers' paper of the member banks. When the central bank increases its note liabilities and its holdings of such assets as government securities and customers' paper previously held by the member banks, the member banks have a smaller amount of these assets and a larger amount of cash.

It is in periods when there is a widespread preference for cash to hold rather than a preference for bank deposits that member banks exchange a large amount of their assets for the notes of the central bank. Under other conditions, namely, when the customers of banks have a preference for deposit credits, both the member banks and the central bank can, at the same time, expand their deposit liabilities and their earning assets. This result is achieved when the central bank chooses to purchase bonds in the open market and the member banks choose to expand their loans on the basis of the greater reserve balances derived from the sales of their bonds. The additional reserves acquired by the member banks makes possible a potential increase in the bank credit outstanding for the banking system as a whole in an amount several times as large as the additional central bank credit. The same result may be achieved when the initiative in this process of credit expansion is taken by the member banks through rediscounting operations. In either case both the system of member banks and the central bank expand their earning assets and their liabilities. If such expansion is to take place, a great demand for loans, as well as a preference for bank deposits, must exist. The extent of the demand for loans is, therefore, a limiting factor in such expansion.

The limits of reserve bank credit expansion. — Thus far in our discussion, there has been no intimation of the extent to which the reserve bank can expand the volume of its outstanding credit. When the reserve bank is required to maintain a reserve in gold coin or gold bullion equal to a certain percentage of its note and deposit liabilities, the limits of expansion are definitely fixed, at any point in time, by the amount of this physical thing (gold) in its possession. When, however, no such requirement exists, it can meet any demand likely to be made on it. Under present law, the Federal Reserve banks must maintain a minimum reserve of 35 per cent of their note and deposit liabilities in gold or gold certificates. Today the volume of gold certificates held by them, as a result of gold imports, is so large that the potential expansion of

Federal Reserve bank credit is much greater than any conceivable demand that will be made on them. For this reason, Federal Reserve policy need not at present be concerned with the protection of its own reserves. It need be concerned only with the quantity and quality of member-bank credit. This observation leads us to a consideration of the purpose of the reserve requirements that are imposed on the member banks.

The purpose of reserve requirements. — From what has been said concerning the nature of bank reserves, it should be clear that the purpose of reserve requirements is to impose restraints on the use of bank reserves. They are an instrument of credit control and a means by which the use of other instruments of control might be made more effective. The act of raising reserve requirements imposes a greater restraint on the use of reserves, while lowering them releases reserves for use as a base for the expansion of member-bank credit.

The effectiveness of changes in reserve requirements may be limited by factors not directly related to the size of reserve balances. For example, the supply of central bank credit available to member banks may be limited by the requirement that member banks can rediscount only short-term customers' paper arising from productive transactions. This requirement was at one time imposed on the member banks of the Federal Reserve System by the Federal Reserve Act and by the regulations of the Federal Reserve Board. Under this requirement very rigid limitations were placed on the use of Federal Reserve credit by member banks, especially in periods when the supply of short-term customers' paper was very small. In one such period, 1930 to 1933, the demand for cash to hold was very persistent and widespread, and forced member banks to sell their bonds to the Federal Reserve banks in order to obtain the necessary volume of Federal Reserve notes. This period demonstrated the invalidity of the assumption that the demand for cash varies directly with the volume of commercial credit. In fact, it demonstrated an inverse relationship between these two variables.

In the Banking Act of 1935 and subsequent legislation, a clear recognition that reserve requirements are an instrument of credit control can be found. This legislation released the Federal Reserve banks from the previously enforced restrictions upon the issuance of Federal Reserve bank credit. It also granted limited power to

the Board of Governors to alter reserve requirements, whereas those requirements had previously been fixed by law. The use made of this instrument of credit control from 1936 to 1939 will be discussed in Chapter XXVI. It is sufficient for present purposes to say that a simple formula whereby reserve requirements are raised only when member-bank reserves fall to a point near the minimum required by law cannot be considered adequate. The excess reserves of member banks are so large at the present time that the application of such a simple formula would result in little or no use of this instrument of control. In fact, excess reserves are so large today that the Board of Governors probably needs greater power to increase reserve requirements than it now possesses, if it should become necessary to reduce excess reserves to manageable proportions.

The cost of reserve balances. — Before proceeding to a consideration of methods of determining reserve requirements for member banks, let us approach the reserve problem in a manner which answers a question frequently asked by the individual banker. The banker frequently asks a question concerning the cost of maintaining reserve balances with the Federal Reserve bank. He may think of this cost as an "opportunity cost" because his bank receives no interest on its reserve balance and it could lend these funds at interest in the absence of reserve requirements. When this question is analyzed from the viewpoint of the functioning of the entire banking system, we may discover in it the same erroneous notion to which attention has already been called, namely, that a reserve balance is some definite physical thing held for the member bank. What may be forgotten is that the Federal Reserve bank, as it acquires a portfolio, pays out funds. The portfolio of the Federal Reserve bank consists, let us say, of government securities, the promissory notes of direct borrowers from it, and the rediscounted paper of member banks. Of these three types of Federal Reserve bank assets, the amount of bills discounted for the member banks is at the present time insignificant in comparison with the total of the others.

Let us trace the results of the acquisition by the Federal Reserve banks of these three types of assets. In doing so, we shall adopt the point of view of the whole banking system, and we shall assume that the Federal Reserve banks have adequate powers to expand

the volume of their outstanding credit if they wish to do so. (1) When the Federal Reserve banks purchase bonds in the open market, the member banks, directly or indirectly, acquire the proceeds of the sale of the bonds in the form of additions to their reserve balances. (2) When the Federal Reserve banks make industrial loans, that is, direct loans to business firms, the credit of the Reserve banks is made available to the member banks whereby the earning assets of the member banks are increased. (3) When the Federal Reserve banks rediscount paper for the member banks, they credit the reserve balances of the member banks with the proceeds of the rediscounting transactions. These transactions cost the member banks the amount of the discounts taken by the Reserve banks, but the rediscount rates of the Reserve banks are probably less than the discount rates of the member banks. It is clear, therefore, that the Federal Reserve banks in acquiring their loan and investment portfolios pay out funds which make possible the acquisition by the member banks of a greater volume of earning assets, so far as their reserve position is concerned.

Two other considerations affect this question of the cost of maintaining reserve balances with a central reserve bank. (1) The huge imports of gold in recent years have built up the reserve balances of the member banks to extremely high levels without a corresponding outlay on the part of the individual banks. (2) Member banks, in the absence of a central bank, might impose on themselves reserve requirements just as high, if not higher, than those imposed on them by the Federal Reserve System. This point is worthy of further elaboration.

In the absence of a central reserve bank, the member banks must necessarily maintain self-imposed reserve requirements. The necessity for this action is inherent in the nature of the liabilities which banks acquire in the banking process. The reserve balances which member banks are required to maintain with the central reserve bank should, therefore, be compared with the greater or lesser reserve balances which they would maintain in their own vaults in the absence of a central reserve bank. Whether the reserve requirements would be higher or lower in the one case than in the other is a matter of conjecture; it is a question of the use of reserves in both cases. In the expansion phase of the business cycle the Federal Reserve banks, acting as a central bank, might attempt to put the

brakes on further expansion by raising reserve requirements to a point that would be higher than self-imposed reserve requirements in the absence of a central reserve bank. During the contraction phase of the business cycle, the individual bank might, in the absence of a central bank, be inclined to build up its vault reserves to a very high point as a means of protection in the event of a further decline in business activity. This action is most likely to be taken by each individual bank in a period when there exists a widespread and persistent demand on the part of the public for cash to hoard. In this situation the individual bank, in an endeavor to place itself in the best possible position to meet a continuation of the drain of cash, would sell some of its assets to provide itself with a large volume of vault cash. In other words, it would maintain high self-imposed reserve requirements. In the presence of a central reserve bank, in which the reserves of the member banks are centralized, the central bank might lower reserve requirements and expand its own credit in order to aid the member banks in satisfying the demand for cash to hoard. The reserve requirements imposed by the central banking system might then be lower than the self-imposed reserve requirements of each individual bank in a banking system without a central bank.

We, therefore, again arrive at the conclusion that reserve requirements are an instrument of credit control. In the hands of a central banking system the use of this instrument of control, especially when supplemented by other instruments of control, provides advantages to the member banks over a situation wherein no central-bank action takes place. This is true largely because the central bank can view the banking situation from a broader perspective than is possible for the individual bank and it is not concerned with the problem of making profits for itself. The central bank can use its powers to prevent, as far as possible, an injurious overexpansion of member-bank credit and, in other situations, it can endeavor to forestall the development of a condition in which member banks are required to sell their assets at continuously lower prices in order to bring cash out of private hoards. Whether central-bank policy can always be completely successful in these attempts is a question beyond the scope of the subject matter of this chapter.

FIXED RESERVE REQUIREMENTS

The notion that reserves are something set aside, not to be used, is deeply ingrained in American banking thought. This idea probably sprang from the demand that specific assets should be held against the note liabilities of issuing banks and was carried over into the realm of deposit liabilities. It is to be admitted, of course, that the requirement of specific assets to support note issue was a necessary restraining influence against the overissue of bank notes. There are, however, two possible methods of control over the creation of too great an amount of deposit liability. The first is to require banks to keep their bank credit below a certain multiple of some specific asset, such as standard money, the quantity of which is subject to natural limitations. The second is to control or administer the type of assets which banks accumulate. In the development of the banking system, the first method seems to have been favored, but we have temporized frequently with the latter method.

In the early years of the Federal Reserve System, the volume of reserves held by the Federal Reserve banks was considered an indicator or barometer of the condition of liquidity of the assets within the whole banking system. For example, about 1922 the financial world viewed with a great deal of alarm the falling reserve ratio of some of the Federal Reserve banks. This situation grew largely out of the excessive speculation in land in 1918 and 1919. The Federal Reserve bank authorities in those years did not conceive their duties to extend to the administration of the assets of the member banks. They considered their task to be only the protection of the reserves of the Federal Reserve banks. This was a paradoxical situation because the Federal Reserve banks were extending credit on commercial paper which was in reality speculative paper because the proceeds of the discounting and rediscounting operations were used in large part in speculative ventures, such as the amassing of huge inventories, engendered by a fear that prices would increase further.

The reserve ratio as an indicator of this condition was not altogether useless since it encouraged action designed to check further expansion. This use of the reserve ratio, however, allows a condition to develop more or less unheeded until the reserve position of the central bank is endangered, and then something is done about

it. Herein lies the danger inherent in the older concept of bank reserves. Perhaps a concept of bank reserves which is more closely related to the composition of the assets of the banking system and their administration would have resulted in better credit control on the part of the Federal Reserve banks. Stating the same proposition from the standpoint of the individual member bank, perhaps a clearer appreciation of the nature of the bank reserve on the part of each individual bank would have resulted in less drastic final action on the part of the Federal Reserve banks.

In 1929 the reserve ratio of the Federal Reserve banks was considered satisfactory and did not reflect a particularly dangerous situation, yet subsequent developments revealed that the real reserve condition of the banking system was highly unsatisfactory. In view of the traditional concept of reserves, Federal Reserve credit policy consisted of little more than moral suasion. Perhaps at this time, as well as in other situations, a clearer realization that a "successful 'holding of reserves' is equivalent to a constant and careful study of credit" would have resulted in earlier application of more satisfactory policies of credit control.

In recent years, certain actions of the Board of Governors of the Federal Reserve System seem to indicate a movement in the direction of closer or more direct control over the assets of the member banks. The instrument of credit control, if it may be so called, which may be used to supplement other instruments, consists of new methods and policies of bank examinations. In the *Annual Report of the Board of Governors of the Federal Reserve System* for 1938, the problem of bank examinations was related to the problem of credit control. This reference to such relationship may indicate a change in emphasis concerning the control of credit whereby greater reliance is to be placed upon more direct methods. It is obviously too early to evaluate the results of this development, but it is worthy of some consideration because it affects both the theory of reserves and the theory of credit control, which are entertained by the Board of Governors. One possible interpretation is that less reliance will be placed upon the reserve ratio as a guide to Federal Reserve policy.

Emergency changes in reserve requirements. — When the bill which finally took form as the Federal Reserve Act was being considered by Congress, it was proposed that the Federal Reserve

banks should not be subject to any fixed-reserve requirements. This idea did not prevail in Congress because most Congressmen and others who entertained the older concept of the bank reserve thought that the absence of such requirements would be dangerous. Another reason for the failure of the framers of the Federal Reserve Act to follow a more realistic theory is that there existed at the time no adequate body of facts upon which to construct a different "system" of reserve requirements. For example, there were no adequate data concerning the rate of turnover of deposits in various parts of the country and in various parts of the banking system. The fear of breaking away from traditional concepts and, perhaps, a failure to understand other concepts, constituted the chief reasons for the fixed-reserve requirements which the Federal Reserve Act imposed upon the Federal Reserve banks.

The reserve requirements finally adopted after much controversy called for a 35 per cent reserve of lawful money against the total deposit liability of the Federal Reserve banks and for 40 per cent of gold against their note liability. If this provision may be regarded as a concession to popular opinion, another provision may be considered a concession to the opponents of the fixed reserve idea. Section 11c of the Federal Reserve Act empowered the Federal Reserve Board to suspend any reserve requirement. It required, however, that a graduated tax be imposed upon deficiencies in the reserves of any Federal Reserve bank, which tax shall be paid by the Reserve bank. A further requirement is that such deficiencies must automatically result in increases in rediscount rates. An exception to this provision is that any deficiency in reserve requirements under the provisions of the Act of May 12, 1933,³ does not require a penalty tax or an automatic increase in rediscount rates.

In practice, the power of the Board to suspend reserve requirements has not been very important, as revealed by the fact that it has never been used. In the immediate postwar depression it seemed likely that the reserve ratio would fall below the required level, but interdistrict rediscounting kept the reserves of the banks upon which the greatest demands were being made above the legal requirements. In a later period, namely, the early months of 1933, the Federal Reserve Bank of New York was subjected to a tre-

³ See Chapter IV for an enumeration of the provisions of this act known as the Thomas Amendment to the Emergency Farm Mortgage Act.

mendous drain because interior banks were withdrawing funds from New York and both foreign and domestic owners of funds on deposit in New York were withdrawing them for the purpose of sending them to foreign financial centers. To cope with this situation, the Federal Reserve Bank of New York borrowed funds from the Federal Reserve Bank of Chicago and thus the necessity for the suspension of reserve requirements was averted. At the present time the problem of reserves is that of management of excess reserves rather than management designed to increase the reserve ratio.

FLEXIBLE RESERVE REQUIREMENTS

In addition to an implied primitive concept of the bank reserve, an objection to fixed reserve requirements is found in the observation that the reserve funds are not obtainable when needed. The proponents of fixed reserves claim that such requirements make certain a body of funds which will not be used for credit expansion. Nevertheless, if a crisis occurs, a fixed reserve is obviously not available to aid in coping with the emergency.

The policy of requiring a fixed legal reserve may be compared to a rule that one fire engine must be kept in the station house for an emergency. Under the operation of this rule not even that emergency engine is available, should a large and disastrous fire break out while the other engines are out attending to smaller conflagrations. Hence the rule defeats its own purpose. Similarly, a fixed legal-reserve requirement may defeat its own purpose unless the requirements are suspended in a crisis. If this is done, the theory of the fixed legal reserve obviously breaks down.

The theory of the reserve requirements of the Federal Reserve Act, as it was originally conceived, would make it unnecessary to change them, since member banks would alter their loan and investment policy in order to increase their free funds, or working reserves, whenever their legal reserves declined to a point near the minimum. Conversely, whenever reserve funds increased greatly above the legal minimum, the member banks were expected to enlarge the volume of credit used in commercial transactions. For these reasons, the action of the Federal Reserve Board in lowering the reserve requirements in 1917, for an avowedly inflationary purpose, was held to be a breach of the theory underlying the Federal

Reserve Act.⁴ Changes in the reserve requirements in 1936 and 1938 could likewise be considered a breach of such theory, whether the theory were tenable or not.

Other criticisms of the reserve requirements against member banks relate to the great difference between the reserve requirements against time deposits and those against demand deposits and the great differences in the requirements against the different classes of banks. The critics who have made these observations point out illogical elements in the present situation, such as (1) the slight difference in the nature of some demand and time deposits and (2) the fact that the banks in some large cities are classified as country banks while those in much smaller cities are classified as reserve city banks.

In view of these criticisms and because of the fact that the present reserve requirements do not take account of differences in the character of the business of individual banks or of the business needs of the country as a whole, a committee was named to study the problem. This Committee on Bank Reserves of the Federal Reserve System, in its report in 1931, recommended uniform reserve requirements for all member banks and for all classes of deposits. It proposed a reserve of 5 per cent against all deposits, plus an additional reserve equal to 50 per cent of average daily debits to deposit accounts. According to the calculations of the committee, this requirement would approximate 8 per cent of deposits. In order to avoid a much higher requirement in unusual cases, a maximum reserve of 15 per cent of gross deposits should be established. The committee summarized its proposed plan in part as follows: ⁵

DEFECTS OF PRESENT RESERVE REQUIREMENTS

In the opinion of the committee, our present system of legal requirements for member bank reserves has never functioned effectively since its inception in 1914. It has not operated to relate the expansion of member bank credit to the needs of trade and industry, nor has it adequately reflected changes in the volume and activity of member bank credit. Furthermore, the committee also finds that present requirements for reserves are inequitable and unfair as between individual member banks and groups of member banks and do not adequately take into account genuine differences in the character of banking in which a member bank may be engaged.

⁴ Willis, H. P., *The Federal Reserve System*, p. 1179. New York: The Ronald Press, 1923.

⁵ Report of the Committee on Bank Reserves of the Federal Reserve System on *Member Bank Reserves*, pp. 5-6, Washington, D. C., 1931.

The committee takes the position that it is no longer the primary function of legal reserve requirements to assure or preserve the liquidity of the individual member bank. The maintenance of liquidity is necessarily the responsibility of bank management and is achieved by the individual bank when an adequate proportion of its portfolio consists of assets that can be readily converted into cash. Since the establishment of the Federal reserve system, the liquidity of an individual bank is more adequately safeguarded by the presence of the Federal reserve banks, which were organized for the purpose, among others, of increasing the liquidity of member banks by providing for the rediscount of their eligible paper, than by the possession of legal reserves. The two main functions of legal requirements for member bank reserves under our present banking structure are, first, to operate in the direction of sound credit conditions by exerting an influence on changes in the volume of bank credit, and, secondly, to provide the Federal reserve banks with sufficient resources to enable them to pursue an effective banking and credit policy. Since the volume of member bank credit needed to meet the legitimate needs of trade and industry depends on the rate at which credit is being used as well as on its aggregate amount, it is essential for the exercise of a sound control that legal requirements differentiate in operation between highly active deposits and deposits of a less active character. Requirements for reserves should also be equitable in their incidence, simple in administration, and, so far as possible, not susceptible of abuse.

Similar principles underlie present reserve law, which in requiring lower reserves against time deposits than against demand deposits, and lower reserves against the demand deposits of country banks than against the demand deposits of reserve and central reserve city banks may have been expected to impose higher reserves on more active deposits than on less active deposits. Notwithstanding the fact, however, that existing requirements would appear to be so arranged as to make reserve requirements vary with the volume and activity of deposits, experience shows that since 1914 and especially since 1922 the proportion of primary reserves held by member banks has steadily declined in relation to the volume of member bank deposits and to their activity.

This outcome has been the result of defects in the definition of reserves, in the method of determining liabilities against which reserves must be carried, and in the classification of banks and of deposits for reserve purposes. The exclusion of vault cash from required reserves of member banks in 1917 has been followed by a reduction in the vault cash holdings of some city banks to a minimum; the rule that amounts due from banks may be deducted only from amounts due to banks has tended to decrease reserves in times of business activity and to increase reserves in times of depression, and the establishment of a low reserve against time deposits in 1914 has facilitated the growth of bank credit without a corresponding growth in reserves. Even if these particular defects in the present system of reserves had not existed, however, the rapid increase in the turnover of demand deposits which has occurred in recent years would still have tended to prevent reserve requirements from increasing in proportion to the growth in the effective use of credit by the customers of member banks.

Proposals of the committee.— Before deciding to recommend fundamental changes looking toward the establishment of a new basis for calculating required reserves, the committee made every effort to frame provisions designed to correct the existing situation through modifications in the classification of cities for reserve purposes and in the classification of deposits subject to reserve, including a more stringent definition of time deposits. As these proposals were studied, however, it became more and more evident that they would not be effective and that an entirely new approach to the reserve problem was necessary.

The committee proposes, consequently, to abolish completely the classification of deposits into time and demand deposits, and the classification of member banks according to their location, into central reserve city banks, reserve city banks, and country banks. Instead, the committee recommends that all member banks and all deposits be treated alike for reserve purposes, and that the formula used in calculating reserve requirements take into account directly, instead of indirectly as in the existing law, the activity as well as the volume of the deposits held by each individual member bank, without regard to the location of the bank or the terms of withdrawal, on which the deposits are technically held. To accomplish this, the committee proposes that each member bank be required to hold a reserve equivalent to (a) 5 per cent of its total net deposits, plus (b) 50 per cent of the average daily withdrawals actually made from all of its deposit accounts. These withdrawals, which are shown by debit entries on the books of member banks, are the only real test of the activity of a deposit account and furnish the only basis by which that activity can be equitably and effectively reflected in requirements for reserves. Under this proposal, therefore, each deposit will carry a total reserve based on its activity as well as on its amount. A totally inactive deposit will carry a total reserve of only 5 per cent, while a deposit balance which is checked out on the average once a week will carry a total reserve equivalent to 12 per cent of its amount. For the average member bank the total reserve under the proposed formula will be equivalent to about 8 per cent of its deposits. To prevent this formula from imposing too great a burden in extreme cases, the recommendations of the committee also provide that in no case shall the aggregate reserve required of a bank exceed 15 per cent of its gross deposits.

The committee proposes to include in legal reserves, in addition to the funds which member banks have on deposit with their Federal reserve bank, their vault cash, with certain limitations, as both classes of funds contribute to the strength of the reserve banks and have a direct effect on the reserve system's control of changes in member bank credit. It proposes also to place country member banks on a parity with city banks with respect to deductions from deposit accounts by permitting banks in calculating net deposits subject to reserve to deduct balances due from member banks and items in process of collection from total deposits instead of from balances due to banks alone, as is the practice at present.

Volume of reserves.— The committee feels that the existing volume of reserves is sufficient at the present time to provide the reserve banks with the funds they

require to perform their functions. Its proposals, consequently, do not contemplate a change in the total amount of reserves. They are intended rather to change the nature of fluctuations in the volume of reserves and to iron out inequitable features in their distribution among the member banks.

Deliberate versus automatic reserve regulation. — The plan to provide for an automatic change in reserve requirements was never adopted. Instead, a plan which was recommended by the Macmillan Committee in 1931 for the Bank of England was introduced by the Banking Act of 1933 as an emergency measure and made a permanent feature of the Federal Reserve System by the Banking Act of 1935. The latter act provides that the Board of Governors of the Federal Reserve System may, by an affirmative vote of four of its members, change the reserves required to be maintained by the member banks against their deposit liabilities; but the reserve requirements shall not be less than the amount required on the date of the enactment of the Banking Act of 1935 (August 23, 1935), or more than twice that amount.

This new plan retains the traditional fixed minimum reserves and, in addition, places in the hands of the Board of Governors a new instrument of credit control which is operative within specified limits. It avoids one of the chief criticisms of the plan of automatically flexible reserve requirements — that to which Anderson called attention in an issue of the *Chase Economic Bulletin*:

... activity of deposits usually reaches its very peak in a panic. When speculation has once collapsed, it becomes definitely dangerous that reserve requirements should be suddenly and sharply raised in a period of panic and liquidation. . . . The "velocity" reserve requirement would not be subject to the use of judgment and might easily be too drastic. It might, on the other hand, be inadequate, through the market's finding ways to reduce turnover . . . it would not accomplish the purpose of restricting the future multiple expansion of bank credit when excess reserves reappear.⁶

Westerfield has called attention to the fact that the flexible reserve plan "ignores, except indirectly, what use is made of the funds," and that "the automatic character of the formula would add another difficulty to the already sufficiently difficult problem of central bank control."⁷ On the other hand, the flexible reserve

⁶ Anderson, Benjamin M., "Proposed Banking Legislation," *The Chase Economic Bulletin*, April 25, 1932, pp. 31 and 35.

⁷ Westerfield, Ray B., *Money, Credit and Banking*, p. 704. New York: The Ronald Press, 1938.

plan based on velocity of deposits is not subject to the political bias which may attend the plan adopted by the Banking Act of 1935.

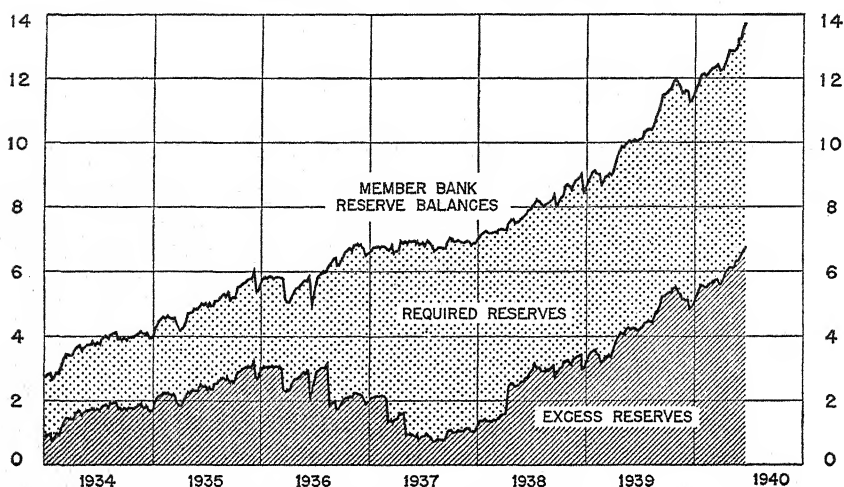
Whatever the merits or demerits of the arguments outlined above, it is obvious that the plan of flexible reserves suggested by the Committee on Bank Reserves of the Federal Reserve System (1931) would have been futile in coping with the reserve problem of recent years. In the face of the huge excess reserves of recent years, any slight increase or decrease in reserve requirements based on changes in the velocity of deposits would have neither retarded nor encouraged the expansion of commercial credit.

THE PROBLEM OF EXCESS RESERVES

If it is true, as has been contended, that the reserve problem of a bank is essentially a problem of asset management, it follows that such management should seek to keep bank funds adequately employed. In recent years banks generally have experienced considerable difficulties in finding satisfactory channels into which to divert their loanable funds. Owing to such factors as the huge net imports of foreign funds and the rise in the domestic production of gold, banks have found themselves in possession of greater reserves than ever before in the face of relatively fewer opportunities for the extension of commercial credits. This situation has produced excess reserves, that is, reserve funds in excess of legal requirements.

The authorities who manipulate the instruments of credit control at the present time have expressed concern over their seeming inability to keep excess reserves within "manageable proportions." This phrase is significant in that it definitely rejects the older idea that the reserve problem will take care of itself with, perhaps, no more vigorous action on the part of the Federal Reserve authorities than the changing of the rediscount rate. It also suggests that the manipulation of the reserve requirements has taken its place among the instruments of credit control. We shall, therefore, discuss the recent changes in reserve requirements in that part of the text entitled "The Control of the Money Market," and be content at this point to discuss briefly the excess and required reserves of the member banks in recent years. Chart 4 reveals excess and required reserves of the member banks for the period 1934-1939.

CHART 4. MEMBER BANK RESERVE BALANCES, 1934-1940



Source: *Federal Reserve Bulletin*, July 1940, p. 682.

LIQUIDITY AND SHIFTABILITY

Measures of liquidity.—Beginning with the Call Report of December 31, 1938, certain improvements were made in the condition statements that are periodically submitted by the member banks. One of these improvements is the breakdown of security holdings into maturity groups. This addition to the Call Reports permitted the Board of Governors to assemble a more complete and accurate classification of the liquid assets of member banks by classes of banks. In the April 1939 issue of the *Federal Reserve Bulletin*, the Board published an analysis of member bank assets by classes of banks in which it discussed briefly its classification of the liquid assets of member banks. This discussion, together with tabular material on this question, is given below:

Measures of liquidity.—Information regarding the maturity distribution of banks' investments makes it possible to obtain from the new condition reports better measures of the liquid position of individual banks than have heretofore been available in published data. From the standpoint of an individual bank, liquid assets or secondary reserves include balances payable on demand, loans that may be readily called or sold in the open market without involving customer relations, and securities that may be sold without risk of material loss of principal. In general, such assets include most of the following: broker's loans, bankers' acceptances, open-market commercial paper, and short-term

high-grade securities, as well as cash and balances with other banks. The following table shows, by classes of banks and in terms of percentages of total deposits, holdings of reported assets corresponding approximately to these various classes.

The table [Table 21] shows that central reserve city banks in New York and Chicago hold relatively larger proportions of their assets in the form of short-term securities and open-market loans, and also have much larger amounts of excess reserves relative to their deposits than do banks in other places. Other banks depend for liquidity to a greater extent upon balances with city correspondents.

Although these figures are shown as totals by classes of banks, they indicate in effect the average ability of the individual banks within each group to meet, without borrowing, shifts of deposits and reserves among banks; they do not measure the ability of the banking system as a whole, or even each group of banks as a whole; liquidity depends upon the amount of excess reserves held, the ability of banks to borrow at the Federal Reserve banks, and open-market operations, by the Reserve System.

TABLE 21. LIQUID ASSETS OF MEMBER BANKS, BY
CLASSES OF BANKS, DECEMBER 31, 1938

(Per cent of gross deposits)

	<i>All member banks</i>	<i>Central reserve city banks</i>		<i>Reserve city banks</i>	<i>Country banks</i>
		<i>New York</i>	<i>Chicago</i>		
Gross deposits	100	100	100	100	100
Reserve balances	20	35	29	15	11
Required reserves	13	20	17	11	7
Excess reserves	7	15	12	4	4
Cash in vault	2	1	1	2	3
Balances with other domestic banks	10	1	7	12	15
Cash items in process of collection	4	5	4	5	2
Open-market paper and loans	3	8	2	2	1
Securities maturing in 5 years or less	17	24	21	15	13
Total	56	73	65	50	45

Source: *Federal Reserve Bulletin*, April 1939, p. 262.

Table 21 also reveals the order of importance at the present time of the liquid assets of the member banks. It is readily observed to be, first, reserve balances, 20 per cent; second, securities maturing in five years, 17 per cent; and third, balances with other domestic banks, 10 per cent. In the present scheme of things, open-market paper and cash in vault are negligible when compared with other liquid assets.

Natural liquidity. — The traditional view of commercial banking holds that short-term commercial loans are liquid and that long-term loans for so-called investment purposes are not to be so classified. It is assumed that commercial loans are almost certain to be paid at maturity because the use to which the proceeds of the loan are applied creates the means of repayment. This assumption is not always valid in the case of customers' loans because they are renewed about as often as not. In fact, most bankers frequently grant renewals to their customers when they ask for an extension of time and adjust their other assets, if necessary, to this situation. The customer of a bank ordinarily establishes a line of credit which he asserts he is entitled to obtain. If one bank fails to grant such accommodation, the customer is likely to seek and obtain it at another bank.

An analysis of the loans and discounts of many banks at the present time will likely reveal other factors which throw some doubt upon the complete validity of the assumption that commercial loans automatically provide the means of their repayment within a comparatively short length of time. We refer to the tendency to grant so-called commercial loans for longer maturities. Sometimes these loans have been obtained for the purpose of retiring outstanding corporation securities, rather than to supply additional working capital. They are not, of course, true commercial loans, but the point at issue is: What loans are truly commercial? We merely call attention to the tendency toward the investment element in loans that are still classified as commercial loans.

Many loans for consumption purposes are also classified with commercial loans. If loans with these characteristics, as well as those with investment characteristics, are excluded from this classification, a tremendous contraction in the operations of our commercial banks would follow any successful attempt to confine them to commercial operations.

Experience in the practical operation of their business has taught bankers not to rely upon commercial loans to customers as a secondary reserve to aid them in crises, and they have fallen back upon various types of open-market paper instead. Open-market paper, in turn, has not proved to be entirely satisfactory as a source of funds for a large number of banks in periods of crises. The individual bank, in liquidating this open-market paper, merely shifts

or attempts to shift the burden to some other banks, or to the public, so that the banking system as a whole obtains no relief from distress in this manner. Even call loans which appear to be highly liquid to the individual bank are not readily convertible into cash in a crisis. In other words, they are highly liquid only so long as any large number of holders does not attempt to liquidate them at the same time. Bonds, too, are far from being perfect as secondary reserves. From 1931 to 1933 the bond market was demoralized because numerous holders attempted simultaneously to convert their bonds into cash.

For reasons such as those just outlined, and perhaps for other reasons as well, Moulton has contended that

... ability to pass through a crisis without suspension of specie payments and widespread credit disruption does not rest upon the payment of maturing loans. It depends rather upon the maintenance of central reserve reservoirs from which distressed banks may obtain the funds required to meet the demands and needs of customers.... Since the establishment of the Federal Reserve System the problem of obtaining cash for seasonal or emergency requirements has been simplified by making it possible for the member banks to shift assets to or borrow from the Federal Reserve banks. The types of assets that are now liquid from the standpoint of individual banks are simply those which are legally shiftable to Federal Reserve banks. *Liquidity has thus become a matter of legal definition.*⁸ (Italics not in original.)

Natural liquidity versus conventional liquidity. — B. M. Anderson, until recently economist for the Chase National Bank, originated the terminology used here. In testifying at the Senate hearings on the Banking Act of 1935 he referred to commercial paper and government bond as possessing "natural" liquidity and said that the proposed Act would substitute a kind of "conventional" liquidity or a liquidity based on law.

The controversy precipitated by the Banking Act of 1935 brought the issues concerning the proper concept of liquidity in banking practice out of the academic atmosphere into the realm of public policy. Perhaps it is more accurate to say that these issues became once again a matter of public policy, since similar, although not identical, issues were involved in the controversies which led to the Banking Act of 1844 in England and to the Federal Reserve Act of the United States in 1913. A recital of specific provisions of these

⁸ Moulton, Harold G., *Financial Organization and the Economic System*, pp. 319-320. New York: McGraw-Hill Book Company, 1938.

acts is not necessary here; it is sufficient to say that it became traditional in British and American banking theory that bank credit serve only the temporary or seasonal needs of business and should not be used to serve the long-term capital or investment needs of industry.

This concept of natural liquidity was challenged by Moulton as early as 1918 when prevailing thought doubtless assumed that liquidity and shiftability were far from being identical concepts.⁹ Later Mitchell contended that certain noncommercial loans and investment paper held by banks had become liquid paper by reason of the development of better marketing facilities.¹⁰

The proponents of natural liquidity seemed, however, to hold the upper hand until very recently, judging by the professed policies of the Federal Reserve Board and by the tone of the Banking Act of 1933. The experiences growing out of the crash of the stock market in 1929 explain in large part the willingness to accept the theory underlying this Act of Congress. Senator Glass, one of the authors of the original Federal Reserve Act, who was influential in framing the Banking Act of 1933, was successful in incorporating provisions which would prevent banks from engaging in many investment banking activities. As previously explained, this act forbade the member banks to handle the so-called "brokers' loans for the account of others." It forced them to abandon their investment affiliates which were engaged in the underwriting and marketing of investment securities and forbade officers and directors of investment banking institutions to serve as officers and directors of member banks, except with the permission of the Federal Reserve Board. A further provision compelled private banks, such as J. P. Morgan and Company, to become either commercial banking or investment banking institutions.

Although the Banking Act of 1933 was not chiefly concerned with imposing positive regulations upon the activities of member banks, its underlying theory was consistent with the conceptions of banking which were held by the framers of the Federal Reserve Act. Between 1933 and 1935 a different theory gained the upper hand.

⁹ Moulton, Harold G., "Commercial Banking and Capital Formation," Part II, *Journal of Political Economy*, Vol. XXVI, 1918, pp. 638-663.

¹⁰ Mitchell, Waldo, *The Uses of Bank Funds*. Chicago: The University of Chicago Press, 1925.

In the hearings on the Banking Act of 1935 held before Congressional committees, Marriner S. Eccles said repeatedly that liquidity of bank assets in periods of financial stress depended upon the willingness of the Federal Reserve banks to exchange them for currency or credit. Such exchanges, according to Mr. Eccles, should not be limited to short-term commercial loans, but should be extended to member banks on notes which are secured to the satisfaction of a Federal Reserve bank.

A group of economists, organized as The Economists' National Committee on Monetary Policy, opposed the provisions of the bill which, when passed, became known as the Banking Act of 1935. They feared that the bill under consideration would convert "what should be a commercial banking system into an illiquid noncommercial system."¹¹ However, Sprague favored the change which would allow the Federal Reserve banks to rediscount any sound asset. This view, which recognizes that "it must be through management that you determine what the wise limit of advances to a particular member bank may be,"¹² finally prevailed and was adopted by the Board of Governors.

Morton, in reviewing the opinions offered in the *Hearings*, concludes that "it now appears that the commercial banking objective has been abandoned"; that "liquidity has become an institutional matter." He argues that "the self-liquidity theory of commercial banking was neither a correct theory of actual bank operation nor a statement of an ideal practice which would have worked if it had been tried."¹³

Henry Parker Willis objected vehemently to the growing tendency to regard shiftability and liquidity as synonymous. He said in 1936:

During the past thirteen years there has been an amazing movement toward the abolition of convertibility in banking generally. In fact, the ill-advised banker of today, whether in or out of the central bank, is in the habit of scoffing at the desirability of self-conversion, regarding it as a mere piece of academic scholasticism. . . . This unwillingness to apply essential restraints in banking . . . with assets more and more tied up in long-term loans, such as real estate mortgages, and less and less in funds available for immediate protection,

¹¹ See House *Hearings* on Banking Act of 1935, p. 761.

¹² *Ibid.*, p. 762.

¹³ Morton, Walter A., "Liquidity and Solvency," *American Economic Review*, Vol. XXIX, p. 276, June 1939.

is the gravest financial danger of the time, the challenge to central banking.¹⁴

His chief argument is an appeal to experience:

... during the depression following the panic of 1929, banks have lost relatively little through the "freezing" of their bona-fide commercial paper, while they have suffered heavily through their inability to dispose of their long-term capital obligations or from deterioration of such obligations when sold at a sacrifice. In a word, recent experience is positively against the acceptance of the doctrine of shiftability in place of that of liquidity as a canon of banking soundness.¹⁵

The incidence of general liquidation. — The question of liquidity of assets must be pursued beyond the confines of the business of an individual bank. The interrelationships between the individual bank and the whole banking system, between the individual firm and the whole industrial system, must be considered if the question of the liquidity of bank assets is to be adequately analyzed. A certain type of bank asset may be liquid from the point of view of the individual bank and yet be illiquid if all banks are trying to sell this type of asset in the open market at the same time. Furthermore, a bank often considers it advisable to hold such assets as commercial loans, in a period of stress and sell some of its assets which are generally considered to be less liquid. General liquidation of either *commercial* or *investment claims* may result in a breakdown of the orderly functioning of our economic system. Claims of either type, held by banks or by others, are shifted about and must finally be met somewhere, by someone, if they do not normally offset each other.

In the present financial system of the United States, the central reservoir for the meeting of these claims in a crisis must be the Federal Reserve banks. Upon them falls the incidence of general liquidation. (From the standpoint of the functioning of the world economy, perhaps one nation might assume, for a while, a part of the burden of another nation. The theory of the international gold standard assumed that this would be done automatically.) If this reasoning is correct, liquidity of bank assets has become tantamount to shiftability,¹⁶ that is, shiftability to the Federal Reserve banks.

¹⁴ Willis, H. P., *The Theory and Practice of Central Banking*, pp. 52-53.

¹⁵ *Ibid.*, p. 164.

¹⁶ See Moulton, *op. cit.*, p. 318.

The relationship between the problem of liquidity of bank assets and the problem of bank reserves is a most important one. If the liquidity problem resolves itself into shifting the burden of meeting claims to the Federal Reserve banks, and the reserve problem is resolved in terms of the ability of the banks to meet obligations as presented, the two problems are obviously identical. We have said, in other words, that the reserve problem is one of wise asset management. The same must then be said of the liquidity problem, for wise asset management means lessening the likelihood of general liquidation for any class of assets for all banks.

When one class of bank assets meets with general liquidation, the quality of that asset is usually greatly impaired. When, for example, banks are forced to sell large quantities of bonds, a decrease in deposits occurs because the bonds are bought with bank deposits. Ordinarily these depositors are willing to buy only the better bonds at prices which represent little or no loss to the seller, or the lower grade bonds at sacrifice prices. The greatest danger, therefore, of that form of bad asset management which results in placing too great a proportion of bank funds into investments, is that it might create doubts regarding the safety of deposits. This situation usually develops after a period of great increase in the deposit liabilities of banks, caused in part by their purchases of bonds.

Sound asset management of a positive nature would seek to prevent a tremendous expansion of bank deposits, whether attributable to a great increase of loans or of investments. Although it is admitted that the question of the length of maturities should not be altogether ignored, the important action to be taken must be of a preventive nature, namely, the prevention of an unduly great volume of demand liabilities which exposes the banks to the danger of sudden liquidation. The problem concerning the maturities of bank assets is one of credit analysis, and not one of obedience to a particular theory of investment loans and commercial loans.

Another attitude that might be taken, although at the risk of a charge of defeatism, is that the assets of banks of the United States are now in a condition in which liquidity and shiftability *must* become synonymous concepts. The noncommercial assets are so large, relative to the commercial loans, that their shiftability to the Federal Reserve banks is a necessary protection against the exigencies of a situation in which no other shifting is possible. This

does not mean that the Federal Reserve banks are required to assume losses, since the member banks are still primarily liable. Neither does it mean that the member banks should keep on piling up noncommercial assets simply because they can be shifted to the Reserve banks.

We may conclude that a rapid expansion of bank deposits is usually a dangerous phenomenon, since it places banks in a vulnerable position in a period of general liquidation; that the incidence of general liquidation falls upon the Reserve banks or results in general business liquidation; that the problem of liquidity of bank assets is not necessarily resolved in terms of short-term versus long-term maturities; and that the task of maintaining the redeemability of deposit liabilities is, in its broader aspect, related to the maintenance of the relatively smooth functioning of the whole industrial order for which the banking system can be held only partly responsible.

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CHAPTER XIII

BANKS COLLECT AND CLEAR CHECKS

The significance of the clearing function. — The performance of the clearing function ties the individual bank to the whole banking system. The collection and clearing of bank checks make the clearing house the nerve center of the whole industrial system, as well as that of the system of banks. It furnishes the mechanism which enables our industrial order, with its high degree of geographical specialization, to run smoothly. Without an efficient system of collection and clearance of checks, the production and marketing of goods and the rendition of services could not have attained a high degree of efficiency.

A thorough understanding of the clearing process is, therefore, necessary to an understanding of the banking process from the viewpoint of both the individual bank and the system of individual banks. The operations of the individual bank affect the position of the banking system and the position of the banking system is in turn a limiting factor in the operation of the individual bank. The significance of this fact will be elaborated in the next chapter which contains an exposition of the expansion and contraction of bank credit. The individual bank, it will be said, cannot expand credit at a rate much faster than that of the system of banks, and the individual bank is practically forced to contract the volume of its credit outstanding when the banking system is engaging in the contraction of credit. The mechanism through which both expansion and contraction takes place is the clearing process.

Another approach to an explanation of the significance of the clearing process is furnished by the observation that clearing operations make necessary a certain degree of liquidity on the part of each unit in the system of banks. The banking system operates, as does our whole economic order, on the presumption that claims against one unit of the system are largely offset by its claims against others. A complete matching of claims, however, is impossible. This being

the case, each bank must be prepared to meet an adverse clearing-house balance; it can do so only with cash, excess reserve balances, or "pledgeable" assets. Deficiencies in these asset items force a bank to liquidate some of its other resources to meet adverse clearing-house balances. In other words, the clearing system furnishes a test of the liquidity of the individual bank and of the banking system.

The individual bank must be prepared to adjust itself quickly to changes in business conditions, for it is usually such changes that create adverse clearing balances for some banks. A lack of good judgment on the part of any bank in its extension of credit, irrespective of general business conditions, may also create these adverse balances. On the other hand, a condition of balance in business operations, and good judgment on the part of bankers generally, is reflected by a maximum matching of claims in the clearing houses.

Velocity of deposit currency. — An interesting item which reveals the relative importance of the check currency in our present economy is the following:

In the year 1938 the twelve Federal Reserve banks handled about five billion separate pieces of coin and paper money, the total value of which was \$9,000,000,000. In the same year they handled a billion checks, the value of which was \$232,000,000,000. In other words, the number of pieces of coin and paper money was five times as great as the number of checks, but the monetary value of the checks was over twenty-five times as great as the amount of currency and coins.¹

The *velocity* or *average rate of turnover* of deposits is measured by the ratio of check payments to average deposits. The computations of this ratio for given areas or for the country as a whole have provided in recent years a very valuable aid in the study of business activity. A given volume of bank deposits may furnish the medium by which a larger or smaller dollar volume of business transactions may be consummated, depending upon the rapidity with which checks are debited to individual bank accounts. The 1940 volume of deposits, if utilized at a higher rate of turnover, would have been sufficient to have sustained a vastly greater rate of business activity. A greater volume of deposits and a greater volume of coins, bank

¹ From *The Federal Reserve System*, issued by the Board of Governors of the Federal Reserve System, 1939, p. 33.

notes, and Treasury currency have not been needed in recent years and will probably not be needed in years to come. Instead, a higher utilization of existing deposits is needed to expand and sustain a higher rate of activity in commerce, industry, and agriculture.

This observation questions the validity of the contention, frequently heard, that a greater volume of currency, in the form of silver certificates, etc., is needed to promote and sustain recovery. Senator Pittman contended that a higher level of economic well-being is dependent upon a higher national money income, and that this, in turn, requires a larger volume of currency in the form of silver coins or silver certificates. In a speech delivered before the American Mining Congress in Los Angeles on October 26, 1938, Senator Pittman said:

The circulating currency of the United States at the present time is about \$6,400,000,000. There must be stable relationship between national metallic reserves, circulation currency, and national income. It is difficult to assure and maintain a national income of over 10 times the amount of the circulating currency covered by 100 per cent metallic reserves. It is admitted, I believe, that the annual national income in the United States should be at least \$100,000,000,000 under normal conditions. . . . To accomplish the balance desired our 100 per cent covered currency issue should be at least \$10,000,000,000.

In addition to the doubtful supposition that circulating currency must have 100 per cent metallic reserves, this statement overlooks the fact that a much higher national real income might result from a more complete and productive utilization of the existing volume of currency and deposits. The Senator contends that a higher national money income would be a consequence of an increase in the volume of a circulating currency covered by 100 per cent metallic reserves. A critic might contend that a volume of circulating currency over and above that demanded by the paying habits of the people would find its way into bank deposits and that the basic problem remains that of utilizing bank deposits through greater activity in the exchange of goods and services.

Debits to individual accounts. — The study of bank debits to individual accounts was first undertaken by the American Bankers Association in cooperation with numerous local clearing houses and was later carried on by the Division of Research of the Federal Reserve Board, beginning in 1918.

In recent years, banks in two hundred seventy-four cities have reported the totals of checks debited to the accounts of their depositors. To the total bank debits of the banks in these cities, the New York City bank contributed 40 per cent in 1939. The huge total for New York City is attributable largely to the fact that banks there have as customers a large number of brokers and dealers in securities, whose accounts have an unusually high rate of turnover. The *Federal Reserve Bulletin* publishes figures of bank debits showing amounts for New York City banks and for two hundred seventy-three other reporting centers outside of New York City. Table 22 shows these figures.

TABLE 22. BANK DEBITS

(Debits to individual deposit accounts, at banks in principal cities.
In millions of dollars)

<i>Year and month</i>	<i>Total, all reporting centers</i>	<i>New York City</i>	<i>140 other leading centers *</i>	<i>133 other reporting centers †</i>
1929.....	982,531	603,089	331,938	47,504
1935.....	402,718	184,006	190,165	28,547
1936.....	461,889	208,936	219,670	33,283
1937.....	469,463	197,836	235,206	36,421
1938.....	405,929	168,778	204,745	32,406
1939.....	423,932	171,382	218,298	34,252
1939 — March.....	37,322	16,274	18,211	2,837
April.....	32,822	13,311	16,832	2,679
May.....	34,656	14,165	17,763	2,728
June.....	36,883	15,312	18,676	2,895
July.....	33,245	12,794	17,683	2,768
August.....	33,314	13,118	17,496	2,701
September.....	36,594	15,138	18,526	2,930
October.....	35,830	13,683	19,029	3,119
November.....	34,666	13,041	18,636	2,990
December.....	43,447	17,633	22,386	3,428
1940 — January.....	37,786	14,739	19,978	3,069
February.....	32,197	12,138	17,344	2,715
March.....	37,769	15,201	19,537	3,031
April.....	37,780	15,519	19,250	3,010

Source: *Federal Reserve Bulletin*, July 1940, p. 558.

* Comprises centers for which bank debit figures are available beginning with 1919, except that one substitution was made in 1920 and one in 1928.

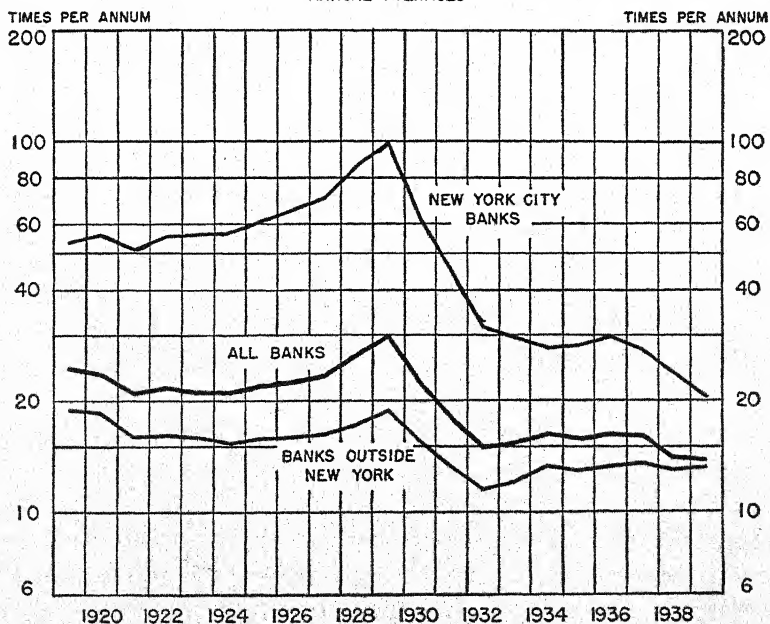
† Centers (other than the 141 centers) for which bank debits are currently reported. The number has changed very little since 1934 and has numbered 133 since 1936.

Upon the basis of bank debit figures and computations of average deposits, the Division of Research and Statistics of the Board of Governors has estimated that the rate of turnover of deposits in all banks, excluding interbank deposits and deposits in mutual savings banks, continued at about sixteen times per annum from 1933 to 1937. In 1939 it dropped to a new low of about thirteen and one-half times a year. This compares with a turnover of about twenty times per annum in the period 1922-1926. The rate of turnover at New York City banks increased from about sixty times per annum in 1924 to one hundred times in 1929, and dropped to about twenty times in 1939. These wide variations are explained in large part by the fluctuations in the volume of activity in the financial markets and, in recent years, by the accumulation in New York City banks of balances held idle and available for investment. A graphical presentation of these facts is contained in Chart 5.

CHART 5

RATE OF TURNOVER OF DEPOSITS AT COMMERCIAL BANKS

ANNUAL AVERAGES



Source: *Federal Reserve Bulletin*, January 1940, p. 7.

CLEARING-HOUSE ASSOCIATIONS

Local clearing houses. — A clearing-house association is an organization of the banks of a community to facilitate interbank relations and to promote the mutual interests of the members. The most common of these interbank relations is the collection and payment of checks payable by the banks of the community. Other functions designed to promote the mutual interests of their members have evolved during the long history of clearing-house associations in countries with well-developed banking systems.

The origin of the London Clearing House is an interesting item in banking history. It was established in 1775 and appears to have been an outgrowth of the practice of bank messengers of meeting in a coffeehouse to exchange the packets of checks entrusted to them for delivery to other banks. The central meeting place enabled the messengers to accomplish their tasks without overlapping trips for the whole group of messengers. Prior to the adoption of the plan of meeting at a central place, each messenger was forced to make the rounds of the other banks to settle balances between his bank and each of the others. The banks of New York City adopted this plan of centralized clearings in 1853. Today, there are several hundred clearing houses in the United States, some of which function only within the cities in which they are established. Others are made up of the banks of a region, which comprises the banks of several smaller cities, towns, and villages, each of which may be too small to justify the expense of operating a clearing house of its own. The banks in the smaller communities which belong to a clearing association of a region, such as a county, may also clear many checks through their correspondent bank in a near-by financial center, for which service the correspondent banks may receive a fee.

A simple explanation of the relationship between an individual bank and the clearing-house association of which it is a member follows. Each day Bank 1 receives from its customers a large number of checks drawn against other banks of the association. The amounts of these checks are credited to the accounts of the customers who presented them, or cash is paid out for them. Prior to the time these checks are presented at the clearing house, they are assembled in bundles, each bundle representing those checks drawn

against Bank 2, Bank 3, etc. The total of the checks in each bundle is entered on a credit slip. By simple addition, the total claims against the other members of the association are calculated. Each member does likewise. At the hour of clearing, the delivery clerks present these bundles of checks to the settling clerks, who may be stationed behind booths on the floor of the clearing house. Within a few minutes, the settling clerk has received the checks drawn against the bank which he represents from each of the other member banks of the association. The total of the checks in each bundle which he receives is entered on a debit slip. After the totals on the credit and debit slips are verified, the clearing house reports to the Federal Reserve bank or Federal Reserve branch bank the results of the day's operations. Since each member keeps an account with the Federal Reserve bank, this account is debited or credited with the difference in the totals of the credit and debit slips. If, for example, the total on the credit slip of Bank 1 is \$1,000,000 and the total on its debit slip is \$900,000, the account of Bank 1 at the Federal Reserve Bank is credited in the amount of \$100,000. In this manner, the need for an interchange of cash between the members of the association is obviated.

In order that the reader might better visualize the operations just described, copies of some of the forms used by a clearing house are reproduced here:

The total of the checks which Bank 39 of the Cincinnati Clearing House presents against Bank 1 is entered on a form similar to Figure 17.

Each of the members of the Cincinnati Clearing House fills out these slips giving the total of the checks drawn against the other members. Bank 39 enters the totals on a credit slip, shown as Figure 18. The checks which are presented against Bank 39 are entered on a debit slip, shown as Figure 19.

[illegible]

* Supplied by Central Trust Company, Cincinnati, Ohio.

FIG. 17. CLEARING SLIP

ters, a procedure such as the following is adopted: After the hour of clearing, a bank continues to receive checks payable by other banks from its customers. Instead of waiting until the next morning to present these checks to the other banks, Bank 39, for example, sends to Bank 1, at a predetermined time, the accumulation of checks payable by Bank 1. It receives from Bank 1 the checks payable by

CINCINNATI CLEARING HOUSE *

403 FIRST NATIONAL BANK BUILDING

Total debits for week ending Wednesday 19

THE CENTRAL TRUST COMPANY #39 Bank

All debits to the accounts of individuals, firms, corporations, and of the U. S. Government; debits against savings accounts; payments from trust accounts; and certificates of deposit paid.

THURSDAY 3,033,202.10

FRIDAY 2,404,607.09

SATURDAY 2,444,000.00

MONDAY 1,230,340.69

TUESDAY 4,321,101.00

WEDNESDAY 5,664,211.11

TOTAL 19,097,461.99*

NOTICE: Please send this report each Wednesday evening so as to reach the Clearing House on Thursday morning.

* Supplied by Central Trust Company, Cincinnati, Ohio.

FIG. 20

Bank 39 during the same period of time. Each bank can then put its clerks to work posting these checks to individual accounts immediately, instead of waiting to receive all of the checks payable by itself when the messengers return from the clearing house after the day's operations there. The checks traded in this manner during the day are included in the clearing totals for the day. The gain in efficiency attributable to this procedure is obvious.

It has been said that the account of each member of a clearing house at the Federal Reserve bank of its district is credited or debited with the amount of its favorable or unfavorable clearing balance for the day. Prior to the establishment of the Federal Reserve System, the most common method of paying these clearing

balances was through the use of clearing-house certificates. Each member of a clearing house would make a deposit with the clearing house and receive in exchange clearing-house certificates. If Bank 1, for example, had a clearing-house deficit of \$100,000 as the result of one day's clearing, it would pay the manager of the clearing house that amount of clearing-house certificates. The manager of the clearing house would pay over to Bank 2 an amount of clearing-house certificates equal to its favorable balance, if that bank was entitled to receive them. This system lessened the risk of transferring cash from one bank to another, while the present system obviates the use of any kind of clearing-house certificate. It consists simply of bookkeeping entries on the books of the Federal Reserve bank.

The present system of settling clearing-house balances extends to banks in cities where no Federal Reserve bank or Federal Reserve branch bank exists. The manager of the clearing house in Dayton, Ohio, for example, telegraphs to the Federal Reserve Bank of Cleveland the amounts which are to be debited or credited to the accounts of the different Dayton banks.

Clearings and collections under the Federal Reserve System.

One of the notable contributions of the Federal Reserve System to the banking process in the United States is the greater efficiency with which clearings and collections are effected today as compared with the procedure used prior to 1914. Each Federal Reserve bank and its branches is required to function as a clearing house for all member banks and all nonmember banks which agree to remit at par through the Federal Reserve banks. Thus the Federal Reserve banks serve as correspondents for the member banks and many others. The procedure by which they carry out this important service for the benefit of American business in general is described in the following paragraphs. In order properly to appreciate the benefits of the present Federal Reserve collection system, it is necessary to state some of the characteristics of the procedures which the present system superseded.

The collection process prior to 1914. — After the Civil War, there grew up in the United States a very complex system of correspondent relationships between banks to collect credit items received in one community and payable in distant communities. The growing willingness of business firms, such as manufacturers and whole-

salers in the larger industrial communities, to accept payments in the form of personal checks from wholesalers and retailers in small communities, gave rise to this collection problem. Two methods of making payments other than by checks drawn against a local bank might have been continued. One method was the shipment of currency; the other was payment by draft on New York or some other financial center. Both of these methods were expensive to the firm or person making the payments. The expense which the first method entailed is obvious. The objection to the second method came chiefly from the drawee banks, since it imposed on them the necessity for keeping large deposit accounts with banks in the financial centers. The forwarding of personal checks seemed to be the most expedient form of making payments. Hence retailers and other business firms favored those wholesalers and manufacturers in the large communities, who were willing to accept this means of payment.

The most simple method of making collections on these items would have been to mail the checks directly to the drawee banks for payment at their face value. Many of the drawee banks, however, insisted on exacting an exchange charge on the checks drawn against them. In other words, they would remit less than the face value of the checks payable by them. The amount of the exchange charge varied from $\frac{1}{10}$ to $\frac{1}{4}$ of 1 per cent of each \$100. The banks receiving out-of-town checks hesitated to pass on the expense of these exchange charges to their customers since the banks in question were competing with each other in obtaining the business of the customers in question. A method of avoiding these charges was, therefore, worked out. It consisted of setting up the rather complex correspondent relationships which have been mentioned.

Banks in different cities entered into agreements whereby each was to collect for the others all checks drawn on those correspondent banks. Among the numerous defects of this system of check collection through correspondent banks, two are singled out for comment:

1. The banks receiving checks for collection from their correspondents gave immediate credit to such correspondents although a considerable period of time might elapse before they were actually collected. The banks which received the bulk of these checks held the legal reserve accounts of the banks transmitting

them. Hence a portion of the float, that is, checks in process of collection, was included in the legal reserves of many banks.

2. Many banks sent bundles of checks drawn on other banks in widely scattered areas to that reserve city or central reserve city correspondent with which they wished to build up their accounts. The city correspondent bank would then route the checks in such manner as to avoid the exchange charges of the drawee banks. For example, a bank near Cincinnati might have sent a check drawn on another bank near the same city to New York City for collection because it wanted to build up its balance with its New York City correspondent, or it might have wanted to avoid the exchange charge of the drawee bank. The New York City bank would then return it, perhaps through the town of the drawee bank, to Cincinnati. The Cincinnati bank would then collect it from the drawee bank.

This method of check collection was not only extremely inefficient but it increased the size of the float as well and, hence, aggravated the somewhat vicious element involved in the granting of immediate credit by the New York bank on the reserve account of the payee's bank. In other words, defect 1 in this system aggravated defect 2, and vice versa.

In a recent discussion of the par-collection controversy, the *Federal Reserve Bulletin* gives an illustration of the roundabout routing of checks prior to the establishment of the Federal Reserve System:

The following, although a somewhat exaggerated illustration, is reported as an actual instance of how circuitous routing of checks was resorted to in order to avoid the payment of exchange: A check on a Sag Harbor, New York, bank was deposited in a Hoboken bank. The check was then sent to New York City, a distance of 3 miles, then to Boston — 200 miles, then to Tonowanda — 405 miles, to Albany — 210 miles, to Port Jefferson — 105 miles, to Far Rockaway — 45 miles, to another bank in New York City — 20 miles, to Riverhead — 75 miles, to Long Island City — 70 miles, and then to Sag Harbor — 90 miles, a total distance of 1,223 miles. This process took 10 days. If the present Federal Reserve collection system were used by the bank in Hoboken, this check would have to go only from Hoboken to New York City and from New York City to Sag Harbor, a distance of only 93 miles.²

The par-remittance controversy. — An amendment to the Federal Reserve Act, adopted on September 7, 1916, authorized each

² February 1940, p. 90.

Federal Reserve bank to receive from member banks for collection, checks or drafts payable upon presentation to any bank in its district. By implication, this amendment was generally interpreted as giving the Federal Reserve banks authority to take whatever lawful means were necessary to collect such checks at par. Acting under this authority, the Federal Reserve banks attempted to establish a par-collection system for the country as a whole. Further amendments supported this attempt by declaring that nonmember banks might establish clearing accounts with the Federal Reserve banks and by forbidding drawee banks from imposing exchange charges against the Federal Reserve banks.

Many small banks, especially in the South and the West, objected to this legislation and to the policies of the Federal Reserve banks. They refused to consider checks drawn on them as being presented for payment at their counters when they were sent by mail from the Federal Reserve banks. Some of the Reserve banks then adopted a plan whereby agents, such as some bank or express company, presented the checks in person to the drawee banks. Certain state legislatures came to the rescue of the nonpar banks with legislation which authorized those nonmember banks with state charters to collect exchanges on checks presented by an agent of a Federal Reserve bank. Further attempts to nullify the actions of the Federal Reserve banks in their endeavors to enforce par-collections consisted of suits to test the legality of the practices of those banks.

Among the principal points decided by the cases which tested the legality of the practices and policies of the Federal Reserve banks are the following:

1. Federal Reserve banks are authorized to receive and collect checks drawn upon nonmember banks, as well as member banks, if such checks can be collected at par;
2. Member banks are required by law to remit at par for checks drawn upon themselves and presented to them for payment by Federal Reserve banks;
3. If nonmember banks remit at all for checks forwarded to them by Federal Reserve banks they must remit at par;
4. Federal Reserve banks are prohibited by law from paying exchange either on checks which they themselves own or which they are handling as agents for others;
5. A state statute authorizing state banks to charge exchange and to make payment in exchange drafts on their reserve deposits for checks presented to them by or through any Federal Reserve bank or its agent is constitutional; and

6. The provision of the Federal Reserve Act which forbids member banks to make exchange charges against Federal Reserve banks is constitutional.³

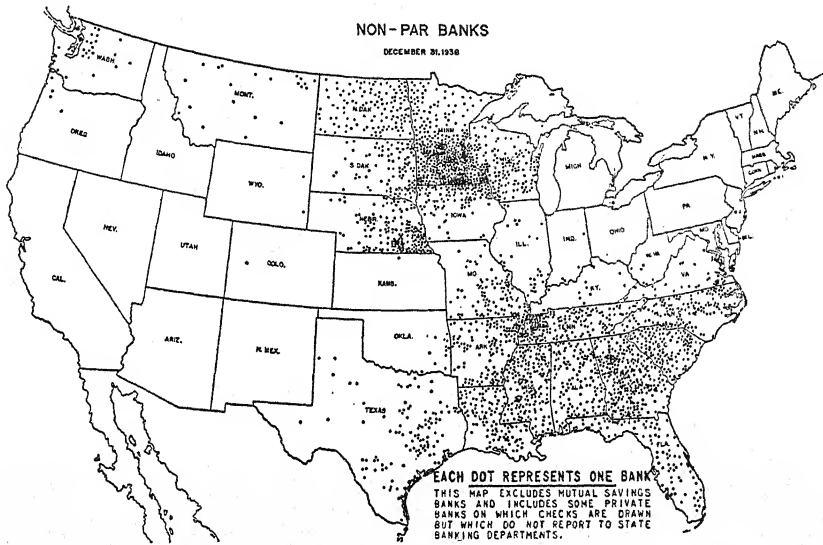
Despite the very commendable purpose of the Federal Reserve System to provide a method whereby checks might be presented to drawees as rapidly as possible and with a minimum of expense to industry, commerce, and agriculture, there were on December 31, 1939, a total of two thousand six hundred and fifty-nine banks which did not remit at par for checks drawn on them. These nonpar banks constituted approximately 18 per cent of the total number of commercial banks. They had total deposits of \$1,081,000,000, or slightly less than 2 per cent of the total deposits of all commercial banks, exclusive of interbank deposits.

There were only twenty-three nonpar banks each with deposits of \$2,000,000 or more. Each of the two largest of these had deposits of about \$16,000,000 and had numerous branches. Most of the nonpar banks were located in small towns and villages. The accompanying map reveals their geographical location. Fifty-two per cent were in the Minneapolis and Atlanta Federal Reserve districts; 94 per cent were in seventeen southern and middle western states, the highest number being four hundred and eleven in Minnesota. In one Federal Reserve district, a group of about forty-seven nonmember nonpar banks were reported to have received receipts from exchange charges of from \$125 to \$500 per month. It would appear, therefore, that some banks are dependent for their existence on exchange charges although the imposition of these charges does not represent a net gain in revenue to the banking system as a whole, because many such charges are absorbed by the banks against which they are made, instead of being passed on to their customers.

Intradistrict clearings. — As finally evolved, the check-clearing process under the Federal Reserve system is composed of two parts: (1) intradistrict clearings, and (2) interdistrict clearings. The first term refers to the procedure by which checks delivered by the payee bank to one of the Federal Reserve banks are, in turn, sent to the drawee bank for collection at par. Under this procedure, a

³ *Federal Reserve Bulletin*, February 1940, p. 92. The most important cases were: 262 U. S. 643, 262 U. S. 649, 3 Fed. (2nd) 465, 11 Fed. (2nd) 866, 271 U. S. 685. See also W. E. Spahr, *The Clearing and Collection of Checks*, Chap. VII. New York: Bankers Publishing Company, 1926.

member bank in Dayton, Ohio, which receives a check drawn on a bank in Akron, Ohio, sends it to the Federal Reserve Bank of Cleveland for collection from the Akron bank. The accounts of the two banks in question at the Federal Reserve Bank of Cleveland are debited and credited by the amount of the check. The proceeds of



Source: *Federal Reserve Bulletin*, February 1940, p. 94.

FIG. 21

the check, however, are not available for immediate withdrawal by the Dayton bank, nor are they credited immediately to its reserve account at the Federal Reserve bank. The Federal Reserve bank gives immediate credit for government checks and checks drawn on banks in the city in which the Federal Reserve bank is located. For other checks, credit is given according to a "deferred availability schedule." Since September 1, 1939, the maximum period for which credit is deferred by Federal Reserve banks on any checks received by them for collection is three days, regardless of the time actually required for collection.

Interdistrict clearings. — Under the present plan of interdistrict clearings, every Federal Reserve bank receives at par checks drawn upon any member bank within its district, when presented by banks outside the district. A check drawn on a San Francisco bank which is cashed by a Cincinnati bank, for example, will be sent by

the Cincinnati Branch of the Federal Reserve Bank of Cleveland to the Federal Reserve Bank of San Francisco for collection. As is the case with intradistrict clearings, the bank in Cincinnati is not given immediate credit on its reserve account with the Federal Reserve bank for the amount of the check drawn on the bank in San Francisco. A deferred availability schedule is used to guide the Federal Reserve banks as to the proper time to credit the account of a payee bank. The Cincinnati Branch of the Federal Reserve Bank of Cleveland reports to the Federal Reserve Bank of Cleveland the amount of the items which it has sent direct to the other Federal Reserve banks and their branches.⁴

The interdistrict settlement fund. — Clearings between the Federal Reserve banks are made by means of a fund, until recently called the Gold Settlement Fund, now called the Interdistrict Settlement Fund. This fund was created by the requirement of the Federal Reserve Act that each Federal Reserve bank place with the Fund \$1,000,000 in cash and, in addition, an amount equal to the indebtedness of each Federal Reserve bank to the other Federal Reserve banks at the time. At a certain hour each day, each bank informs the Board of Governors of the Federal Reserve System, by direct wire, of the amount of checks it received the previous day drawn on banks in other districts. Thus the Federal Reserve Bank of Cleveland, for example, finds its balance with the Interdistrict Settlement Fund increased or decreased as a consequence of the interdistrict clearings of each business day in much the same manner as a bank in Cleveland finds its balance at the Federal Reserve Bank of Cleveland increased or decreased as a result of the clearing operations of the Cleveland clearing house. Just as the balances of the banks of Cleveland with the reserve bank of that district are used to obviate the necessity for transferring huge sums among those banks, the Interdistrict Settlement Fund obviates the frequent shipment of money from one section of the country to other sections. Another advantage which has accrued from this efficient system is that it has almost eliminated the float.

⁴ The Fourth Federal Reserve District at present operates differently from other Federal Reserve districts on availability items. It has been chosen for an experiment which dispenses with the usual "rainbow" schedules (deferred availability slips), such as those used by banks in other Federal Reserve districts. This change saves the member banks the very considerable expense of sorting checks according to the availability schedules.

Since the balance of the Federal Reserve banks with the Interdistrict Settlement Fund is counted as a part of their legal reserves, they have not hesitated to allow these balances to remain far above that which the Federal Reserve Act demands. The requirement, therefore, that cash must be shipped immediately by the bank which allows its balance to fall below \$1,000,000, is of little practical importance. The greater part of the gold certificate reserve of the Federal Reserve banks is, at the present time, in the Interdistrict Settlement Fund.

One of the most noteworthy contributions of the Interdistrict Settlement Fund is that through its facilities telegraphic transfers of funds are made for banks from one district to another. For example, a member bank in California having occasion to transfer funds to a customer in Massachusetts may do so almost instantaneously. These transfers are made without charge. The sum total of these transfers is settled daily through the Settlement Fund in Washington. The aggregate amount of the daily settlements among the Federal Reserve banks in 1939 was approximately \$103,000,000,000.

The settlements between the Federal Reserve banks which have been described are called transit clearings. In a recent week, the total of these clearings effected through the Interdistrict Settlement Fund was \$2,032,965,985.52. Exchanges of Federal Reserve notes are also made through this fund. The necessity for such exchanges arises from the fact that the law prohibits a Federal Reserve bank from paying out the notes of other Federal Reserve banks, under penalty of a tax of 10 per cent, and accordingly each Reserve bank sorts out such notes from its own. Those that are fit for further circulation are returned to the bank that issued them; those that are unfit are sent to the Treasury for retirement. These Federal Reserve note clearings amounted to \$15,548,000 in a recent week. A third form of clearings effected through the Interdistrict Settlement Fund is called transfers for Treasury. The balance of one of the Federal Reserve banks is debited and that of another is credited when the Treasury transfers funds from the one to the other. These transfers amounted to \$25,000,000 during the same week for which figures are given above.

Other clearing-house activities. — In addition to their chief function of clearing checks, many local clearing houses perform other

useful services for their members. In the performance of these other functions, clearing-house associations act in a manner similar to trade associations. Their general purpose is to raise the plane of banking operations. Among the more important of these special services are the following: (1) publishing statistical reports, (2) examining member banks, (3) fixing uniform exchange and collection charges, and (4) fixing uniform rates of interest on deposits.

1. *Publishing statistical reports.* — The volume of clearings has often been used as a barometer of business activity, since about nine-tenths of the business of the United States is done by checks. Careful students of the banking process and business conditions are aware, however, of the dangers involved in using comparative clearing figures without a consideration of several conditioning factors. Before relying upon a 25 per cent decrease in the volume of clearings in one year, as indicative of a proportionate decrease in business activity, changes in the price level, bank consolidations, and irregular factors in the business situation affecting a particular area should be taken into consideration. In addition to bank-clearing figures, some clearing associations publish reports, chiefly for the benefit of their members, on a variety of other topics.

2. *Examining member banks.* — The clearing houses in the larger cities maintain examination departments which examine the clearing-house members. The purpose of these bank examinations may be somewhat different from those of governmental units. The examinations by clearing houses inquire into tendencies which seem to violate good banking practice and good policy, and make recommendations concerning them while examinations by state and federal boards may be more negative in character. There are recent indications, however, that bank examiners of state governments and of the federal government will, in the future, seek to be more helpful and less punitive in their activities.

A familiar example of the activity of a clearing house in saving one of its members from a "run" of depositors who must soon know of its financial difficulties has often been cited by writers. The reference is to a situation which developed in Chicago in 1905. The members of the clearing house in that city advanced several million dollars to a large national bank of which a prominent financier was president when it was discovered that the bank was

in financial difficulties. The reason for so doing was doubtless the fear on the part of the solvent banks that a general loss of confidence in the banking structure of the whole community would occur. It was an enlightened self-interest which impelled the solvent banks to take this emergency action and to devise a plan to prevent its recurrence. This plan consisted of a system of bank examinations by the clearing house to eliminate as many as possible of those practices of its members which often lead to a loss of confidence in banking institutions generally.

3. *Fixing uniform exchange, collection, and service charges.* — The desirability of uniform rates of exchange, collection, and service charges among the banks of a community is obviously related to the problem of eliminating a rather vicious form of competition. Some of the responsibility in this direction has been taken over by state and federal regulatory bodies in recent years, but the clearing-house associations still provide a convenient mechanism through which many problems concerning fair charges for the performance of banking service can be mediated. The rapid extension throughout the country of plans for uniform charges can be justified on broad economic grounds in that the independent actions by one bank which hurt other banks, cannot benefit the whole system of banks.

4. *Fixing uniform rates of interest on deposits.* — The recent legislation which has been described in the preceding chapter follows closely that which many clearing-house associations adopted on a smaller scale long before the adoption of this legislation. Uniform rates of interest on deposits were agreed upon by the banks of Buffalo as early as 1881. Within the limits of this recent legislation, clearing-house associations may still have a function to perform in the direction of uniform rates of interest on deposits.

The fixing of uniform rates on bank loans to customers has been a topic for conversation among the members of many clearing-house associations. Hard and fast agreements on this matter, however, are not adopted because such action would make for a greater rigidity in interest rates than now exists and it would probably invite restrictive legislation. Informal agreements, however, seem to have been entered into, since interest charges of banks on loans to customers are surprisingly uniform, especially in the smaller communities.

SERVICE CHARGES ON CHECKING ACCOUNTS

The service charge on checking accounts is now in general use by banks in all sections of the country. These charges are a new development in American banking practice, having first come into prominence after 1933 when banks were required to impose them on customers under the Bankers' Code of Fair Competition. The abolition of this code resulted in the substitution of voluntary agreements for compulsory ones. These voluntary agreements were generally entered into by the members of clearing-house associations.

Basic reason for service charges. — The large number of unprofitable accounts found in all banks is the basic reason for the imposition of service charges. What accounts are to be classified as unprofitable depends to some extent on the units of measurement which are employed by a given bank. In general, an unprofitable account is one in which the balance available for employment in earning assets is inadequate to yield a return which compensates a bank for servicing it. Whatever the details of the measuring device, the average size and the activity of each account are the principal bases for rendering judgment as to its profit or loss status.

The service charge, when collected, is intended to cover the expenses incident to the performance of those services which each checking account entails, to the extent that these expenses are not met by earnings from it. A two-fold purpose is implied in this statement, namely, (1) to compensate the bank for services rendered and (2) to encourage depositors to adjust their accounts so that they might avoid the service charge and, hence, increase relatively the number of profitable accounts which the banks hold.

Free services performed by the banks. — Largely by reason of severe competition among banks for new business, banks generally assumed the cost of performing many free services for their customers. As long as bank earnings were good, despite the assumption of these costs, banks exhibited little or no concern over this development. When bank earnings began to decline, however, the cost of bank operations received greater attention. The American Bankers Association set up commissions to study various aspects of banking practices. One of these studied the free services

which banks perform for their customers and presented a list common to practically all banks, a part of which follows: ⁵

- Armored car
- Cashier's checks (at par) for payment of non-customers' local bills
- Cashing out-of-town checks for non-customers
- Check books
- Collection of bill of lading drafts
- Collection of notes, drafts, and coupons
- Converting foreign moneys into U. S. currency, and vice versa
- Credit information
- Currency shipments
- Deposit tickets
- Drawings against uncollected funds
- Endorsement stamps
- Interest on checking accounts
- Interest on proportion of checking accounts kept as reserve, without interest, with Federal Reserve banks
- Investment advice
- Issuing drafts on other cities
- Making up payrolls
- Novelty savings banks to stimulate savings
- Overdrafts — N.S.F. checks
- Passbooks
- Safekeeping of securities for individuals
- Safekeeping of securities for out-of-town banks — clipping of coupons, exchange of bonds, etc.
- Telegraphic transfer of funds
- "Temporary" safe deposit boxes
- The small checking account
- The small savings account that draws frequently
- Transit items credited at par.

Since this report was made, many of these items have been taken off the "free list" on the initiative of individual banks and clearing-house associations, while others, such as interest paid on deposits, have been the objects of regulation by state and federal regulatory bodies. The chief point of interest here is that all of these free services began to be scrutinized with greater and greater care as bank earnings declined.

Unprofitable accounts. — The American Bankers Association has published a study of the accounts of a bank, which was said to be typical of the situation in many banks until service charges were

⁵ *Unprofitable Practices and the Remedy*, Commercial Bank Management, Booklet IV.

generally adopted as a part of banking practice. In the bank in question, 46.9 per cent of its accounts, representing only 1.4 per cent of its deposits, were under \$50 and averaged \$12.88; 57.5 per cent of its accounts, representing 3.1 per cent of its deposits were under \$100 and averaged \$23.60. It is suggested that the gross annual earnings from these accounts cannot, even when invested at 8 per cent, cover the cost of servicing them.

A study of the customers' accounts of a country bank in Ohio revealed the following situation: Prior to the installation of a system of service charges, it had a total of 1,143 checking accounts, of which 1,006 had average balances of less than \$500. These 1,006 accounts were 88.01 per cent of the total number of accounts and they produced 57 per cent of the bank's check activity, or 49 per cent of all of its activity. They furnished the bank with 13½ per cent of its funds and netted the bank a loss of \$4,600. The remaining 137 accounts showed a sufficient profit to the bank to enable the other 1,006 accounts to have bank service at the expense of the more profitable accounts.

Analysis of depositors' accounts. — In the absence of a plan for the imposition of service charges on the unprofitable bank accounts, the holders of those accounts must necessarily benefit at the expense of other depositors or the stockholders of the bank in question. A method of individual accounts analysis, sometimes called measured service, attempts to assess each depositor for service in proportion to the extent of this service. The problem encountered in the operation of service charges based on an analysis of individual depositors' accounts is to find the cost of servicing each account and the earnings attributable to each account. The costs occasioned the bank by each depositor are made up of the special costs of handling his account and a proportion of the general and fixed expenses of operating a bank. It is, of course, impossible to allocate to each account exactly that part of the overhead and fixed expenses for which it is responsible. A system of measured service discussed later presumes, however, to come close to doing so.

Income from service charges. — The service charge, which has been cultivated in an attempt to offset the loss of gross income, is one of the most important new sources of revenue to banks. Although service charges on depositors' accounts have been made

by some banks for many years, the rates at which these charges have been assessed have been increased by some banks in recent years and have been adopted by other banks which formerly did not impose them. In 1939 these charges yielded \$54,000,000 in revenue as compared with \$39,000,000 in 1936 and \$21,000,000 in 1933. The 1939 total comprised 5.4 per cent of total earnings and 13.57 per cent of net current earnings of the member banks of the Federal Reserve System. The cost of operating a service charge system is not ascertainable since many banks have been able to add the work involved to the duties of their regular employees. Neither is the loss of revenue from other sources attributable to the imposition of service charges ascertainable, if such losses are directly or indirectly incurred. Generally speaking, the establishment of service charges has proved to be an important method of maintaining reasonable returns on the capital stock of many banks.

Arguments for and against measured service. — The assumption underlying the description of a typical system of service charges based on the analysis of individual accounts is that it is undeniably just, as far as the depositor is concerned, and wise, as a matter of bank policy. That this assumption is in large part valid cannot be doubted; yet it should be pointed out that some objections can be raised against this new development in American banking practice. For example, some depositors who maintain accounts which are unprofitable to a bank at the present time may maintain profitable accounts at a later time. They pay service charges during the time their accounts are unprofitable (excluding the income from service charges) and receive no interest on their checking accounts when they do become profitable, since banks are forbidden, at the present time, to pay interest on such accounts. Furthermore, one of the motives for the imposition of service charges is to enable the banks to increase their income during a period of low yields on earning assets. It is very doubtful, however, that these service charges will be lowered if the yields on earning assets should increase. A third objection which depositors might raise is that the payment of service charges should give the depositors a right to insist that their funds be employed only in low-risk assets, yet the depositors, as such, have little or no assurance that the deposited funds will be so employed. A fourth objection of some depositors is that they are borrowers from the bank in

which they maintain unprofitable checking accounts. These depositors pay the going rate on their borrowed funds and a service charge as well, especially if they draw on their checking accounts periodically to make payments on their loans.

Those bankers or other persons who are proponents of a plan of service charges based on the analysis of individual accounts, meet these arguments with the contention that banks today must submit to numerous regulations designed to protect the depositors. The Federal Deposit Insurance Corporation, for example, is designed to protect depositors, especially the depositors with small bank balances, which protection is costly to banks in that they must pay a certain percentage of total deposits into a fund which is managed by the Federal Deposit Insurance Corporation. Furthermore, depositors are frequently in a position to adjust their bank accounts so that they may be serviced by their banks at lower costs.

From a broader point of view, as contrasted with the point of view of the individual depositor, it should be observed that banks cannot properly use ordinary cost-accounting methods for the determination of service charges, for reasons which arise from the presence in our banking system of the phenomenon of bank-credit expansion. If an account brings cash out of circulation to a bank, that bank may be able to expand credit on the basis of this cash and obtain earnings on many times the amount of the cash received. In the determination of reasonable and fair service charges on checking accounts, therefore, consideration should be given to the difference between accounts which bring to a bank cash that was previously outside the banking system and additions to deposits arising from the floating of the bank's own debt. This consideration is ignored in the blanket application of ordinary accounting methods, or the use of any other method of analysis of individual accounts yet conceived.

Whatever the arguments for and against individual accounts analysis and service charges, now frequently referred to as measured service, it is likely that this new development will become a permanent feature of American banking procedure. If so, the practical aspect of this question resolves itself into attempts to work out a system which is the most equitable to all parties concerned.

SUGGESTIONS FOR FURTHER READING

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CHAPTER XIV

EXPANSION OF BANK CREDIT

Introduction. — In the preceding chapters, it has been stated that bank deposits are increased by the extension of loans or the purchase of investments, as well as by the presentation of cash by bank customers. It is our task here to appraise the limits to which the banks, acting in unison, may increase their deposits by means of loan and investment expansion and to determine the variables which influence these limits. Some general conception of the process may be secured by assuming that a bank, possessing excess reserves, has a request for a loan for \$1,000 which it grants. The borrower may choose to receive the loan as an addition to his account with the bank rather than in the form of currency. He will then draw checks in payment of his obligations, and the recipients of the checks may likewise choose to accept a bank credit rather than currency. If so, the transaction has increased the deposits of the banks involved by \$1,000, since the total of deposits is not affected by the shift from one bank to another.

From this simple example, it can be seen that the individual banker, when he receives deposits from his customers in the form of checks and cash, cannot determine whether the checks are drawn against deposits created by loans or whether the deposits are the result of the presentation of cash. It is impossible, therefore, for us to find the answer to our problem of bank-credit expansion by a study of the activity of an individual bank. But it will be found useful to approach the question by first studying the individual bank and then examining the changes in our analysis which are required by the existence of a system of banks.

The importance of bank-credit expansion. — To some students, the expansion of credit is one of the most unsettling influences in modern life and its stabilization is therefore regarded as a most promising point of future economic control. To others, the expansion and contraction of credit is a powerful instrument facilitating the transfer of economic resources from one employment to another

as new methods of production demand new organizations of productive factors. Under this view, the stabilization of bank deposits would be undesirable since it would retard this necessary movement of resources. While it is impossible to participate in this debate at this point, one concession may be made to the latter view: a major part of the business transactions in the United States is represented in the field of money by a transfer of bank deposits rather than by a transfer of cash. Therefore, bank deposits, by being scarce or abundant, may have an important effect upon the state of business. If scarce, they may prevent or retard the growth of output during certain periods when most of the other requirements for such an expansion are present. On the other hand, if further increases in the quantity of credit are used to overexpand investment in given lines during the period of prosperity, it is probable that the credit is destructive to sound economic development.

From the standpoint of the student, a knowledge of bank-credit expansion is important for a number of reasons. In the first place, the available quantity of balances is often a factor in judging the strength or weakness of particular business conditions. Most forecasters of business conditions employ the potential supply of bank credit as one of the variables upon which predictions are based. Secondly, appreciation of the behavior of credit, and the variables which condition its expansion, is of paramount importance in understanding the behavior of money. The elements which limit the expansion of credit are in part a result of the habits of society in handling the money supply and in part a consequence of the laws with which we seek to control the supply.

It should not be supposed from what follows that the banking system always automatically expands to the limits permitted by these laws and customs, for one of the most basic factors required for the actual expansion to these limits is an active demand for accommodation at the banks. If the public does not desire additional monetary resources, it is beyond the power of the banking system to increase the credit supply by a significant amount. It should be clear, therefore, that the following is a discussion of limits of expansion and not of the practical degree to which the banking system may go in any particular circumstance. In view of the small demand for funds at the present time, the ratios of possible expansion have little significance today. But at some future

date it is possible, even probable, that such ratios will be of the highest practical importance.

VARIABLES IN THE EXPANSION OF CREDIT

An analysis of bank-credit expansion may be approached by first reviewing some of the salient features of the banking process. The most important of these are: (1) reserve requirements, (2) the relation of deposits to cash in circulation, (3) the relative size of the individual bank, and (4) the relation of the loan policy to bank-credit expansion.

Reserves. — In the study of bank reserves, it was shown that members of the Federal Reserve System are required to keep a certain percentage of their demand and time deposits on reserve with the Federal Reserve bank of their district. Prior to the changes authorized by the Banking Act of 1935, these reserves were 7 per cent for country banks, 10 per cent for reserve city banks, 13 per cent for central reserve city banks, and 3 per cent for all banks on time deposits. This act, however, empowered the Board of Governors of the Federal Reserve System to increase reserve requirements by as much as 100 per cent of their former levels in controlling the expansion of credit. Since these rates have been changed a number of times, the rates which previously prevailed will be used in our analysis. Obviously a higher reserve requirement will mean a lower ratio of expansion, although not proportionately lower since this is not the only variable involved.

While only the figures for legal reserves are generally used in studies of credit expansion, it should not be forgotten that a bank cannot operate on reserves which are only large enough to satisfy the legal minimum. The reason for this is that a bank must hold a certain amount of cash in its own vaults and this cash cannot be counted as part of its legal reserves. This fact reduces somewhat the amount of possible expansion, although cash in vaults is seldom of a significant amount.

Relation of bank deposits to cash in circulation. — It is a matter of familiar observation that while we make most of our payments by the use of bank balances which we transfer by the use of checks, there remains a certain number of payments which are made through the use of currency. In the process of spending and investing its income, the public carries part of its liquid resources in the

form of cash in its pockets. The ratio between cash in hand and bank deposits has been changing steadily, at least since 1890 in the United States, in favor of bank deposits; but a certain residuum of payments continues to be made by the use of cash. If the money incomes of the public rise, the public carries a larger amount of cash, and if incomes fall, cash holdings decline correspondingly, barring a desire to hoard currency because of fear of credit collapse. Angell and Ficek¹ have estimated that \$9 of cash are required to support each \$100 of bank deposits, using the data for the period between 1926 and 1930 as the basis for their estimate. While the stability of this figure may be questioned in view of the periodic interruption of attempts to hoard, it will serve the purpose for which it is used here.

Relative size of the individual bank. — The expansion and contraction of income in modern society is reflected in individual banking units. If the general demand for credit accommodation rises, each bank can expect to share in it in proportion to the relative amount of the total deposits which it holds. If the changes are purely regional, only certain banks are affected or feel the increased demands for credit. Barring this contingency, our best assumption is that each bank is affected by given economic and financial events in the same proportion that its deposits bear to the deposits of the entire banking system. The average bank in the United States holds deposits equal to 0.004 per cent of the demand deposits of the banking system. If we use the largest bank in the country, this figure is increased to about 2 per cent, while the smallest unit is a negligible fraction. Since our final results in the analysis below are only slightly affected by this element in the analysis, we shall use the figure for the average bank.

Loan policy and bank-credit expansion. — The fourth variable operating to set limits upon credit expansion is the practice, followed by some banks, of requiring a borrower to maintain a deposit during the life of the loan equal to some percentage of the amount borrowed. This is usually referred to as the "20 per cent rule," since 20 per cent has been the most common requirement. Approximately the same result follows when a bank limits its line of credit to any individual to five times his average balance.

¹ Angell, J. W. and Ficek, K. F., "The Expansion of Bank Credit," *Journal of Political Economy*, February 1933, pp. 1-33; April 1933, pp. 152-194.

While most of the large metropolitan banks have discontinued this practice long ago, it still persists in the small banks where it affords a method of avoiding the state usury laws. Whether or not the rule is followed strictly by a bank, it is probable that the borrower will maintain a greater average deposit during the life of the loan than he would have held without it. Immediately after the advance is granted, his balance will be reduced sharply as he makes the payments which he foresaw when asking for the loan. Later, as he sells his goods or other materials acquired with the funds, he will build up his bank balance in anticipation of the maturity of his loan. Thus, during the early part of the loan period, his balance will be below the amount required by the rule; but during the period immediately preceding maturity, his balance will approximate the amount of the loan. Clearly, it is impossible to determine an exact ratio from this description. These facts simply demonstrate that a ratio of some definite proportions must be employed in the analysis of bank-credit expansion, particularly in the individual bank, to allow for this feature of the loan-expansion process. Another consideration which strengthens the practice of including this element is that if the bank were able to arrange the maturities of loans in a perfect sequence, some of the balances would be declining while others would be rising, so that a considerable amount of the balances resulting from loans would remain on deposit at all times.

In connection with the treatment of the entire banking system, the "20 per cent rule" may be excluded from the analysis, since the inclusion of the large banks makes the assumption less real. Furthermore, since withdrawals from one bank are compensated by gains on the part of the other banks in the system, no violence to the facts will result from such an omission.

CREDIT EXPANSION IN AN INDIVIDUAL BANK

The technique for analyzing the limits of bank-credit expansion has traditionally begun with a treatment of the changes which develop in an individual bank when a loan is granted. This procedure has the advantage of clarifying some of the problems before others are encountered and will, therefore, be followed here.

An individual bank which expands its loans during a period when

other banks in the system are neither expanding nor contracting their loans will find itself subjected to three types of drains upon its reserves, namely: (1) the withdrawal of balances to other banks, (2) the drain of cash into circulation to be used as hand-to-hand currency in conjunction with the increased demand deposits, and (3) the reserves which are impounded for meeting the legal reserve requirements against its new deposits.

Let us assume that a bank, possessing excess reserves of \$1,000, receives a request for an advance of the same amount. We may determine the ratio of expansion in a single bank by estimating the total reserves which will be lost or impounded as a result of the loan and then expressing this quantity as a ratio of the original excess reserve.

Withdrawals of deposits to other banks. — Assuming that banks follow the practice of requiring that 20 per cent of a loan be left on deposit, the customer securing a loan of \$1,000 will have a disposable balance of only \$800. He will draw checks for this amount and the funds will be diffused throughout the banking system, each unit receiving a percentage representing its proportion of the bank deposits of the entire system. The bank which originally made the loan is not excluded from this; if it is of average size, it will receive in this diffusion 0.004 per cent of the \$800.00, or slightly more than \$0.03. Thus, the cash losses of the lending bank are reduced to \$799.97. But we have, so far, taken account of only one of the drains upon the reserves of this lending bank.

The second drain upon the bank's reserves develops when the public withdraws currency from the bank, a step which is now necessary in order to reestablish the previous ratio between cash on hand and deposits. Once having determined this loss, we shall be able to determine the net increase of the lending bank's deposits against which the legal reserve requirements may be computed.

Withdrawal of cash by the public. — The amount of cash in the hands of the public has already been stated to be a certain proportion of the total available means of payment. Since bank deposits have been increased by the extension of a loan, the entire banking system will be subjected to a cash drain large enough to reestablish the former relation between cash and deposits. If it is assumed that the public desires to hold \$9 of cash for each \$100 of deposits, then the cash will be $\frac{9}{109}$ of the total, or 8.3 per cent.

The deposits available for withdrawal in all the banks have been increased by \$800. The public may, therefore, be assumed to desire to hold part of this amount as cash and the remainder as a deposit credit. To reestablish the previous cash to deposit ratio, it will withdraw 8.3 per cent, or \$66.40. This is the amount of cash withdrawn from all the banks. If the bank in the present illustration is assumed to be of average size, it will lose its proportionate part of the currency or \$66.40 times 0.004 per cent, or about \$0.003. The bank making the original loan of \$1,000, therefore, will have lost \$799.97 by deposits in other banks and \$0.003 by cash withdrawals, or a total of \$799.973, leaving a net increase of its deposits of \$200.027.

Required reserves. — The increase of \$200.027 in the deposits of the lending bank will have to be covered by reserves, the amount of which will depend upon the legal requirement for banks in cities of its particular class. If we assume that it is a reserve city bank with a requirement of 10 per cent, then the legal reserves will be \$20.0027. While the bank does not lose this in the sense that it is withdrawn, it is impounded as a reserve as long as the deposit exists, and consequently is not available for the support of other advances. The addition of this reserve requirement to the losses suffered through withdrawals to other banks and from cash drains into the hands of the public indicates that the bank will have a total loss of \$819.98, or about \$820.00, because of its loan of \$1,000. Since it possessed excess reserves of \$1,000, there will remain \$180.00 which may form the basis for repeating the same process. It would be possible to arrive at the limits to the amount of deposits an individual bank can create on a given reserve by repeating the analysis on the remaining \$180.00. This procedure would give a remainder on which the process would again be repeated until the remainder approached zero. It is simpler, of course, to divide the original reserve of \$1,000 by \$820, which gives a coefficient of expansion of 1.22. This means that an individual bank, operating under the conditions which have been assumed, would be able to lend \$1,220 on an excess reserve of \$1,000.

Limitations. — The above illustration shows that when an individual bank adopts a policy of loan expansion not followed by the other banks in the system, it soon finds its cash reserves impaired so seriously as to stop its lending. It further demonstrates that the

credit system must expand and contract as a whole or not at all, since the extent to which a single bank can arrest a decline or stimulate an expansion is negligible.

A condition that is basic to the above treatment, and one that has seldom received attention in this connection, is the relative rates of regional change which, in the analysis given here, have been assumed to be equal. If the bank creating the \$1,000 loan had been located in a region expanding at a rate substantially higher than the rest of the country, the chance of its losing its proportionate part of the funds in the clearing-house settlement would be reduced. There would be a drift of capital into the area with a resultant increase in the balances of the local business establishments. This would mean that banks located in regions where the rate of growth was lower than the national rate would fail to receive their proportionate part of the funds diffused throughout the system by the original loan expansion. This limitation does not vitiate our analysis since the gains of one bank or set of banks would be offset by the losses of others. In the postwar decade, comparatively high rates of economic growth prevailed in California and Texas, and it is probable that banks operating in these sections found little difficulty in meeting their clearing-house requirements while the textile sections of New England probably encountered just the opposite conditions.

Any attempt to broaden this aspect of the problem of credit expansion to a consideration of the effects when the funds are moving across international boundaries would involve the complexities of foreign exchange and the intricacies of existing banking organizations. It must be postponed, therefore, until some systematic treatment of these subjects has been accomplished.

CREDIT EXPANSION IN A SYSTEM OF BANKS

The study of the expansion of bank credit in a single bank employed the assumption that the other banks in the system were neither expanding nor contracting their loans. It should be apparent that if other banks followed a policy of restricting their loans, the individual bank which attempted to expand would find its cash drained to a greater extent than its proportion of the total banking assets would justify. An individual bank, therefore, could not

expand its deposits appreciably above the amount of its excess reserves under these conditions. It is possible, if the contraction of loans is very large, that the individual bank might lose its excess reserves without having created balances by granting loans or purchasing investments.

Since our problem is to determine the maximum limits of a loan expansion on a given reserve, we may continue the analysis in terms of a situation wherein all banks expand their loans rather than hold them constant. For this problem, the assumption of an active demand for loans will be continued.

<i>Number of bank</i>	<i>Additional deposits received (100%)</i>	<i>Additional loans made (85%)</i>	<i>Additional reserves retained (15%)</i>
1st bank	\$15,000,000	\$12,750,000	\$2,250,000
2nd bank	12,750,000	10,837,500	1,912,500
3rd bank	10,837,500	9,211,875	1,625,625
4th bank	9,211,875	7,830,094	1,381,781
5th bank	7,830,094	6,655,580	1,174,514
6th bank	6,655,580	5,657,243	998,337
7th bank	5,657,243	4,808,657	848,586
8th bank	4,808,657	4,087,358	721,299
9th bank	4,087,358	3,474,254	613,104
10th bank	3,474,254	2,953,116	521,138
All other banks	19,687,439	16,734,323	2,953,116
Total	\$100,000,000	\$85,000,000	\$15,000,000

When all the banks in the system are expanding at the same time, it will be unnecessary to consider the ratio of a given bank's deposits to the entire system of deposits. The funds which are lost by the bank first creating a loan are gained by the remaining banks, in which the funds become available for reserves against deposits growing out of still other loans. If the process of loan expansion were continued through these banks making loans to the maximum permitted by legal and customary limitations, we could determine the expansibility of a given amount of excess reserve by adding together all these separate acts of expansion and dividing their sum into the original excess reserve. Suppose, for example, that all banks are required to maintain reserves of 15 per cent on deposits and that this requirement is the only limitation upon their creation of deposits. A bank receiving a deposit of \$15,000,000 in gold

would hold a reserve of \$2,250,000 against it and would lend and invest the remaining \$12,750,000. Individuals receiving these loans would draw checks that, we may assume, would be deposited at a second bank where the same process would be repeated. If the process were continued through a series of banks, the results would be somewhat as is indicated by the hypothetical illustration on page 344, quoted from the *Federal Reserve Bulletin*.²

Since this analysis is devious and also ignores cash withdrawals by the public, we can follow the same procedure that was used in our first case. In other words, we may estimate the amount of reserves required and the amount of cash withdrawn into the hands of the public as the result of a loan, and then express this total as a ratio of the original excess reserves.

Suppose the banks of the system hold excess reserves of \$1,000 against which they grant loans of \$1,000, by which amount customers' accounts are credited. If an average balance of 20 per cent is required, only \$800 of this is available for use by the customers of the banks. The cash withdrawals against this amount will be, as before, 8.3 per cent of the new deposits, or \$66.40. The banks will be required to hold legal reserves of 10 per cent against the amount by which their deposits are increased (\$933.60). They will therefore need legal reserves of \$93.36. The total excess reserves lost through the withdrawals of cash and impounding as legal reserves will be \$93.36 plus \$66.40, or a total of \$159.76. The coefficient of expansion will then be \$1,000 divided by \$159.76, or 6.26. This means that the system of banks can create a total of \$6,260 of deposits on an excess reserve of \$1,000, when credit expansion to the limits permitted by existing laws and customs takes place.

The coefficient of expansion which has been developed here is materially lower than that frequently quoted in the popular press, where it is usually stated that a system of banks can expand its excess reserves ten times. The difference is accounted for by the fact that the ratio of 10 : 1 is developed without consideration of the drain of cash into the hands of the public. Since this is so truly a part of the results which follow from a loan expansion, the ratio developed here is unquestionably more accurate and more realistic over a long period of time. The older ratio may be more typical

² *Federal Reserve Bulletin*, February 1940, p. 100.

at the upturn of the business cycle when the public is already liberally supplied with cash because of the hoarding of the previous period of depression. Toward the end of a long period during which business has improved, a greater than proportionate demand for cash occurs as the funds which have been borrowed by business are spent for payrolls. Individuals with small incomes, who do not maintain checking accounts with the banks, carry a large proportion of that income as cash. In the period of prosperity, the demand for cash may be higher than has been assumed in our analysis. The average ratio of cash to deposits over the entire business cycle, however, is probably fairly close to the ratio which has been used in the above solution.

CREDIT EXPANSION THROUGH THE CENTRAL BANK

Up to this point, excess reserves have been discussed without specifically considering their form. As a matter of fact, the forms which these reserves take will be found to vary from one country to another. In the United States, the major part of the banking is carried on by units operating as members of the Federal Reserve System. The reserves of these banks are held by the Federal Reserve banks of the various districts. It should be recalled that the Federal Reserve banks are not required to hold gold equal to the reserves that their members deposit with them; that is, the gold (now gold certificates) held by the reserve banks need be only a fraction of their deposit and note liabilities. In view of this, it is apparent that the Federal Reserve banks may contribute to credit expansion, if it be their policy, by loans, rediscounts, and open-market purchases.

During the period from 1913 to 1933, the Federal Reserve banks were required to hold reserves in gold or lawful money equal to 40 per cent of their note and 35 per cent of their deposit liabilities. In continuing this analysis of the limits of credit expansion, we shall find it necessary to take account of these two conditions. Furthermore, since it is of only slight significance at this advanced stage in our study, we may abandon the rule that the depositor is required to maintain a balance equal to 20 per cent of the loan. Its inclusion would raise our final ratio by only a small amount. With the elimination of this variable and the inclusion of the reserve ratios required of the Federal Reserve banks, the problem now includes

four factors, namely, (1) the drain of cash into the hands of the public, (2) the reserve requirements of the individual banks, (3) the reserve which the Federal Reserve banks must maintain against their notes, and (4) the reserve which they must maintain against member-bank deposits.

The procedure in this case need not be changed, so that we may assume the system of banks to create \$1,000 of loans and then determine the amount of gold or gold certificates which the Federal Reserve banks will have to hold to support the resulting expansion of deposits. The ratio of cash in circulation to deposits has been found to be \$1 : \$8.3 when an allowance is made for the effect of the withdrawal on the reserves required against deposits. The loan of \$1,000 will therefore produce a cash withdrawal of $\$1,000 \times 0.083$, or \$83. Since the Federal Reserve bank must hold only 40 per cent of this amount in gold, the gold impounded by this drain will be $\$83 \times 0.40$, or \$33.20. Member-bank deposits will be increased by the amount remaining after the cash has been withdrawn or by \$917. By reason of the fact that member banks are required to hold reserves equal to only 10 per cent of this amount, their deposits with the Federal Reserve banks will need an additional amount of only \$91.70 above that which was necessary before the loans were made. The Federal Reserve banks will have to hold gold or lawful money equal to 35 per cent of this, or \$32.10. Adding the reserves required for the notes and deposits, we find that a total of \$65.80 in gold or lawful money will have to be held by the Federal Reserve banks as a result of the original loan of \$1,000. Since the original loan is 15.19 times (\$1,000 divided by \$65.80) the amount of gold needed to support it, it is apparent that the system of banks, operating through a central bank under the conditions we have assumed, could create loans of \$15,190 on a gold reserve of \$1,000. In creating loans of this amount, the banks will have created an equal amount of notes and deposits. It is this process which is in the mind of most students of economic and banking problems when they refer to the expansion of loans by the banks.

Assumptions of the foregoing analysis. — The purpose of the previous analysis has been to define in more or less realistic terms the maximum limits to which the present American banking system could proceed in the creation of deposit balances. For such a treatment of foreign conditions, the assumptions would have to be

changed to conform to the laws and banking customs of the individual countries. Thus, a country in which a larger proportionate reserve was carried, and where the public made more of its payments by means of currency, would have a lower coefficient of expansion. Since these differences exist, it is possible that gold flowing from the United States, for example, may cause credit to contract at a faster rate here than credit could be expanded in the country that received the gold. If the banks of the United States customarily expand credit eight times the amount of their gold reserves, while the French banks expand credit only four times, the reduction of credit in the United States due to export of gold to France would be twice as great as the French expansion.

The most important conditions required for the achievement of maximum credit expansion are (1) a central bank policy which, for whatever reasons, considers credit expansion desirable, (2) the presence of an active demand for the loans which the banks could create for the account of the public or the government, and (3) a banking community inclined to grant loans because of a favorable attitude toward future business conditions. These conditions are cited merely to show that credit expansion does not occur automatically when only the monetary requirements are present.

The ratios established in the preceding discussion may be somewhat inaccurate since many banks are not members of the Federal Reserve System and are therefore not subject to the same rules concerning the maintenance of reserves. However, since few, if any, of the states have banking laws which are stricter than the national regulations, we may assume that our coefficients would not be lowered by a closer approximation of the facts. A second limitation exists in the fact that not all circulating notes are issued by the Federal Reserve banks. A sizable part of the circulating currency is made up of fractional coins, greenbacks, and other Treasury issues. If all the circulating media were made up of these elements so that no gold were required for note expansion, the coefficient of expansion through a central bank would be increased from 15.4 to about 28.

ECONOMIC IMPORTANCE OF CREDIT EXPANSION

Review of the process of credit expansion. — In order that the determinants of credit expansion may be clear, we may review

the reasons why credit expansion can occur. First, it may be seen that, for the most part, when the public spends its income, it does so by transferring a claim against a bank to the sellers of goods and services. Likewise, the costs of production of these goods and services are discharged by a similar transfer of claims. Payments by the public involve additions to the accounts of persons making deposits and deductions from the accounts of persons drawing the checks; therefore most payments do not require a withdrawal of currency from the banks.

Second, the American banking system has developed on the basis of a fractional reserve system, making it possible for the deposits of the banks to become much larger than the cash resources held. The growth of a system of correspondent banks and their supersession by the Federal Reserve System reduced still further the standard money which had to be held by the entire banking system in order to meet the legal requirements. The other elements considered in the above analysis are of secondary importance to these two conditions.

Advantages. — The discussion through the three preceding cases has shown that if a country's money consisted exclusively of gold, it would need as much gold as money, the two being the same thing. If the country developed unit banks which were not connected through a clearing system, they would be able to issue \$1.22 for each dollar of gold. With the development of a clearing system, the dollar of gold affords a basis for \$6.27 of circulating medium and the addition of a central bank expands the amount to \$15.40. By this process, it becomes possible for the country to supply itself with larger amounts of money without further investment of resources in gold.

A second advantage of the process is inherent in its flexibility, which permits the supply of money to expand and contract as the needs of trade change. There have been periods in the monetary history of the United States when business was retarded by the lack of a means of payment and the production of the country was thus lower at these times than it would have been with a sufficient money supply. In fact, there are those who contend that it is impossible to organize a banking system in a money economy in which the supply of money is not flexible. For example, the English requirement of a 100 per cent gold reserve against all note issues above a

stated minimum is allegedly the reason for the extensive development of check currency there. Whether this can be established or not, certainly it is true that the varying needs of trade must be met either by a flexible supply of money or by a supply relatively so large that part of it can lie idle during periods of slack business.

Disadvantages. — The disadvantages of a money system which affords such possibilities of expansion as our present organization lie chiefly in the fact that flexibility and instability are two ways of viewing the same thing. As has been shown, an individual bank can do little to expand credit when other banks are contracting the volume of their loans; neither can it do much to arrest an overexpansion when the remainder of the system is fostering overexpansion by a policy of easy credit. The existence of a credit system of such high coordination thus forces all the parts of the system to expand and contract together. If it were possible to segregate individual banks and allow them to expand and contract independently of each other, a greater degree of stability might prevail in our economic system. It is doubtful, however, whether monetary stability alone could achieve the desired degree of economic stability.

A second aspect of bank-credit expansion is that it represents, in a sense, an extra-legal supply of money. No method has yet been put into operation by which this expansion could be completely controlled in the interests of society, although numerous proposals have been made which profess to accomplish this result.

CREDIT EXPANSION AND BANK CAPITAL

In Chapter VIII, it was suggested that the quantity of capital which the owners of the bank contribute may at times be a limiting factor in the expansion of bank credit. This statement does not refer to the same phase of credit expansion that the foregoing analysis deals with. But because of its vital significance at certain periods, it may be examined at this juncture.

The relation between these two banking elements may be illustrated by assuming that an expansion of credit is occurring and that the banks of the system show capital stock and surplus, deposits and excess reserves as follows:

<i>Assets</i>		<i>Liabilities</i>	
Excess Reserves	\$2,000,000	Unimpaired Capital Stock and Surplus	\$1,000,000
		Deposits	4,000,000

According to our preceding analysis, if the reserves consisted of gold, the banks could expand their deposits by \$12,540,000 without the cooperation of the central banks, or \$30,700,000 if the expansion is carried out with the aid of the central-banking authorities. The first condition would produce a ratio of 12.5 : 1 between deposits and capital account and the second, a ratio of 30.7 : 1. It is easy to see that under either of these conditions, and especially the latter, losses on loans and investments would not have to be large to eliminate the capital account completely and leave banks insolvent.

In the past, it has been possible for the banks to increase their capital because of earnings retained or by the sale of their stocks, thereby continuing the expansion, once it has been initiated. As the credit structure expanded, the prices of securities rose and business volumes increased. The banks earned larger profits per share through the extension of larger volumes of loans as well as from the recovery of bad debts which had been written off during the preceding decline. The public was, therefore, willing to invest in bank shares as a speculative medium. High security prices made it possible for the banks to sell their shares at favorable prices.

One might question why the subject should have been included since, on the surface, it appears that the banks can expand the credit which eventually is used to buy their shares as well as the commodities which produce favorable business conditions. The reason is that in a period when interest rates are low and limited opportunities for investment cause the banks to invest in large amounts of government bonds, a different situation from those which have prevailed in the past may develop. Under conditions of low earnings and limited speculative interest in securities, it may become impossible for the banks to secure additional capital except on the most unfavorable terms. When this occurs, the banks may stop purchasing government bonds rather than place themselves in a position in which small changes in the market prices of the bonds may lead to heavy charges against their capital account.

SUGGESTIONS FOR FURTHER READING

- Angell, James W. and Ficek, Karel F. "The Expansion of Bank Credit," *Journal of Political Economy*, February 1933, pp. 1-33; April 1933, pp. 152-194.
Crick, W. F. "The Genesis of Bank Deposits," *Economica*, June 1927.
Phillips, C. A. *Bank Credit*. New York, 1926, Chapters I-III.
Westerfield, R. B. *Money, Credit and Banking*. New York, 1938, Chapter XII.

CHAPTER XV

BANKS ISSUE FINANCIAL STATEMENTS

Introduction. — The chief purposes of a study of bank statements are to reveal the nature of the banking process and to reveal the condition of the individual bank at a given time. Whether the one purpose or the other is the more important depends on the reasons for which the study is undertaken. If a student of banking is interested in obtaining a knowledge of how banks perform their functions in the operation of our economic system, he would find bank-statement analysis invaluable and, perhaps, indispensable in gaining such knowledge. This purpose refers to bank-statement analysis in general. The other purpose indicates an interest in the financial condition of an individual bank preparatory, let us say, to reaching a decision concerning the probable safety of funds deposited with it.

When bank-statement analysis covers a period of years, it may have a further purpose, namely, that of indicating the direction of banking and business developments. This purpose is best served by the computation of ratios from the composite statements of a large number of banks over a period of time. For example, one might wish to know the changing importance of the bondholdings of commercial banks, in which case the ratio of the investments of those banks to their total earning assets at each call report for ten years would probably reveal a trend in a certain direction. Specific developments in the business world might likewise be revealed by the same data which reveal trends of banking developments. An example of this may be found in a decline in the commercial loans of banks at the time that excess reserves are high and interest rates are declining. This condition among banks generally would reflect either slow business activity or a change in the methods of financing business and, at the same time, a change in banking trends.

The materials presented in this chapter may be used to serve all the purposes that have been mentioned. They are divided into three parts, namely, (1) the statement of the individual bank, (2) the

composite statement of all the member banks of the Federal Reserve System, and (3) the statement of the Federal Reserve banks.

THE STATEMENT OF THE INDIVIDUAL BANK

The member banks of the Federal Reserve System in most recent years have been required to publish a financial statement four times during the year. Each member bank is required at the same time to submit a condition report to the Federal Reserve bank of its district. These condition reports are made on the so-called call dates, which in 1939 fell on March 29, June 30, October 2, and December 30. Unfortunately the items listed in the typical bank statement which is published in a daily newspaper do not correspond to the classification of items used in making the condition reports to the Federal Reserve bank. A detailed bank statement would not be understood by the general public and would defeat its chief purpose. However, a condensed statement makes difficult an exact comparison of the condition of an individual bank with the combined reports of all the member banks as published in the *Federal Reserve Bulletin* and the *Annual Report of the Board of Governors of the Federal Reserve System*.

Typical bank-statement ratios. — The nature of each of the items which comprise the most important elements in a bank statement has been explained in previous chapters. The task that remains is the analysis of these accounts, which analysis can best be made in terms of bank-statement ratios. In order to facilitate this study, two forms of the financial statement of a bank located in a reserve city are reproduced here. Several banks have used this "easily understood bank statement" form in recent years, chiefly for the interest it attracts, and have also issued a "sworn statement," as required by law. In the computations of ratios the latter is used.

Ratio of deposits to capital funds. — In the statement of the "Reserve City Bank and Trust Company," shown in Figure 22, the deposits are classified under six headings, the most important of these being the deposits of individuals, firms, and corporations. A simple computation reveals, for this bank statement, that the ratio of total deposits to capital funds is 10.3 : 1. If interbank deposits are subtracted from total deposits, a ratio of 9.4 : 1 is obtained. A further computation results in a ratio of 8.5 : 1 of deposits to capital funds, excluding interbank deposits, public funds, and trust funds.

REPORT OF THE CONDITION OF RESERVE CITY BANK AND TRUST COMPANY Cincinnati, O., a Member of the Federal Reserve System, at the close of business on June 29, 1940.

Published in accordance with a call made by the Federal Reserve Bank of this district pursuant to the provisions of the Federal Reserve Act and the Superintendent of Banks of the State of Ohio.

ASSETS

Loans and discounts (including \$3,357.42 overdrafts)	\$19,735,963.08
United States Government obligations, direct and guaranteed	33,996,220.88
Obligations of states and political subdivisions	238,300.37
Other bonds, notes and debentures	5,351,104.87
Corporate stocks (including \$198,750.00 stock of Federal Reserve Bank)	900,903.59
Cash, balances with other banks, including reserve balance, and cash items in process of collection	21,692,578.50
Bank premises owned, \$355,391.79; furniture and fixtures, \$358,824.86	1,214,216.65
Real estate owned other than bank premises	1,656,727.89
Other assets	122,575.08
TOTAL ASSETS	\$84,908,590.91

LIABILITIES

Demand deposits of individuals, partnerships and corporations	\$41,880,754.49
Time deposits of individuals, partnerships and corporations	22,363,487.88
Deposits of United States Government	3,559,519.45
Deposits of states and political subdivisions	1,861,040.00
Deposits of banks	7,241,364.45
Other deposits (certified and officers' checks, etc.)	203,233.20

TOTAL DEPOSITS	\$77,109,399.47
Other liabilities: July 1, 1940, dividend, \$50,000.00; accrued interest, taxes, etc., \$242,071.85	292,071.85

TOTAL LIABILITIES (not including subordinated obligations shown below)	\$77,401,471.32
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CAPITAL ACCOUNTS

Capital *	\$ 5,000,000.00
Surplus	1,625,000.00
Undivided profits	882,119.59

TOTAL CAPITAL ACCOUNTS	\$ 7,507,119.59
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TOTAL LIABILITIES AND CAPITAL ACCOUNTS	\$84,908,590.91
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* Common stock with total par value of \$5,000,000.00.

MEMORANDA

Pledged assets (and securities loaned) (book value):	
U. S. Government obligations, direct and guaranteed, pledged to secure deposits and other liabilities	\$ 6,551,993.22

Assets pledged to qualify for exercise of fiduciary or corporate powers, and for purposes other than to secure liabilities	203,102.10
TOTAL	\$ 6,755,095.32

Secured and preferred liabilities:	
Deposits secured by pledged assets pursuant to requirements of law	5,420,559.45

Deposits preferred under provisions of law but not secured by pledge of assets	1,821,609.20
TOTAL	\$ 7,242,168.65

The following items are published pursuant to state law:	
Funds on deposit by Trust Department which are preferential under Sec. 710-165 G. C.	\$ 1,821,609.20

Hypothecated or assigned deposits under Sec. 710-180 G. C.	316,494.79
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I, _____, vice president of the above-named bank, hereby certify that the above statement is true to the best of my knowledge and belief.

Correct — Attest: _____

Directors.

State of Ohio, County of Hamilton, ss:

Sworn to and subscribed before me this 2nd day of July, 1940.

[SEAL] _____, Notary Public in and for Hamilton County, Ohio.

My commission expires Oct. 30, 1940.

AN EASILY UNDERSTOOD BANK STATEMENT

(As of June 29, 1940)

This is what we own —

"RESOURCES"

The cash we have on hand and the amount due us from the Federal Reserve Bank equal	\$13,593,476.39	
We have on deposit with banks in New York and other cities	8,099,102.11	
Total cash and due from banks		\$21,692,578.50
We own United States Bonds	33,996,220.88	
We own stock in the Federal Reserve Bank	198,750.00	
We own other bonds and securities	6,291,558.83	
Total amount of securities owned		40,486,529.71
We have loaned to customers for use in business and for other purposes	19,732,605.66	
Through error customers have overdrawn their accounts to the extent of	3,357.42	
Total amount due from customers		19,735,963.08
Interest and other earnings accrued to date, amount to		122,575.08
Our real estate, safe deposit vaults and fixtures are carried at		2,870,944.54
Total of our resources		\$84,908,590.91

This is what we are liable for —

"LIABILITIES"

Individuals, firms, and corporations have on deposit with us	\$62,625,866.37	
Banks and trust companies have on deposit with us	7,241,364.45	
We hold on deposit United States Funds and other Public Funds, which are secured by pledge of United States Bonds	5,420,559.45	
We hold Trust Funds awaiting investment or distribution (under the laws of Ohio, these funds are preferred deposits)	1,821,609.20	
Total amount due depositors		\$77,109,399.47
Dividends payable July 1st, 1940		50,000.00
We have accrued to date for payment of taxes, insurance and interest		242,071.85
Total of Deposits and other Liabilities		77,401,471.32
The balance over and above our total liabilities represents the depositors' margin of safety. It is carried on our books as follows:		
Capital	5,000,000.00	
Surplus	1,625,000.00	
Undivided Profits	882,119.59	7,507,119.59
Total of Our Liabilities Plus Our Working Capital		\$84,908,590.91

RESERVE CITY BANK AND TRUST COMPANY

MEMBER
The Federal Reserve System



MEMBER
Federal Deposit Insurance Corporation

This ratio reveals the extent to which the banking corporation operates with the funds of others as compared with the funds which constitute its liabilities to the owners. Reasons for a high ratio between these two items may be found in an inordinate degree of credit expansion, a policy of extreme liberality in the declaration of dividends, or the assumption of great losses which have been charged against the capital account. A very low ratio between deposits and capital funds reflects, in most instances, an unsuccessful banking venture, because the amount of business it conducts can hardly justify the amount of owners' funds which has been invested in it.

Although no definite figure can be said to represent a "correct" ratio of these two most important liability items, it is safe to say that a ratio of 2 : 1 is too low to enable a bank to make money and that a ratio of 15 : 1 is too high to assume safety for depositors. In the former case, a bank must feel impelled to build up its deposits, while in the latter case, steps should be taken to build up its capital structure. It is nevertheless possible for the bank with a ratio of 10 : 1 between deposits and capital funds to be better able to withstand a crisis than another bank with a ratio of 8 : 1, because the former bank may have better loans, investments, etc., than the latter institution. It may also have a more alert management and a more stable group of depositors who are not so likely to become panicky.

Ratio of loans and investments to capital funds. — The bank whose financial statement is here submitted to analysis shows a 8.1 : 1 ratio of loans and investments to capital funds. In other words, the two most important earning assets of this bank are more than eight times as great as its proprietorship accounts. In this case, the bank should be able to make a fair rate of return on its capital stock, unless the gross yield on its earning assets is very low or its operating expenses are very high. This ratio, therefore, reveals the probable success or failure of the bank in its endeavors to yield a reasonable return on the investment of the owners. Of course, many factors other than this ratio affect the bank's earnings, yet a bank with a high ratio of loans and investments to capital funds is likely to earn a higher return to its owners than a bank with a low ratio of this type.

The ratio of loans and investments to capital funds should be compared with the ratio of deposits to capital funds. It is quite

likely that the first of these ratios is lower than the latter because a bank must necessarily keep a considerable part of its assets in a form which yields no income. The most important nonearning assets are: (1) cash on hand and due from other banks and (2) bank building and equipment.

Percentage of investments to total loans and investments. — The Reserve City Bank and Trust Company, on the date of issuance of the statement, as shown in Figure 22, possessed an amount of bonds equal to 66.7 per cent of the total of the loans and investments. The same computation revealed an amount of loans equal to 33.3 per cent of the total loans and investments.

These ratios illustrate the extent to which a bank engages in furnishing long-term funds to industry and to government, as compared with the extent to which it lends shorter-term funds to its customers. The very high percentage of bonds (as compared with its bond holdings ten or fifteen years earlier) to the total earning assets of the Reserve City Bank and Trust Company is typical of American banking and is a reflection of the economic and political conditions in which the present banking system operates. The trend toward investing a larger percentage of total earning assets in bonds, particularly the bonds of the federal government, has been depicted in some detail in an earlier chapter and needs no further elaboration here.

Percentage of cash to total deposits. — In the financial statement under analysis, 28.2 per cent of the total deposits are supported by cash on hand and due from other banks. Not all of this amount of cash is available to be paid out by the bank in the ordinary course of business, since a large part of the funds due from other banks is tied up in the Federal Reserve bank in the form of legal reserves. Upon liquidation of the bank, however, this sum becomes available to the depositors or stockholders.

Assuming the continued operation of the bank, the ratio which is most significant is not that of the amount of cash on hand to total deposits, since this is usually a negligible percentage figure. What is far more significant is the amount of total assets that can be converted into cash for the benefit of depositors in a crisis or emergency situation. No ratio, nor any absolute figure, accurately reveals this amount, since no one can say in advance what assets can be converted into cash to meet a future emergency. It depends, in part,

upon the severity and the geographical limits of the crisis. If the crisis is a local one, government bonds may be easily sold on open markets or shifted to the Reserve banks, and commercial paper received from customers may be readily rediscounted. If the crisis is severe and widespread, a bank may be forced to liquidate as much as it can of all the various forms of its assets, or the central bank must temporarily assume them. To repeat, a ratio between an asset item, or combination of asset items, and a liability item does not, in itself, contain any assurance of the liquidity or shiftability of the asset item in question. Most, or all, of the so-called liquidity ratios assume a normal functioning of the banking system and of the economic system.

Percentage of loans and investments to total assets. — Since the chief earning assets of a commercial bank consist of its loans and investments, the ratio of these assets to total assets shows the degree to which a bank keeps its loanable funds employed. When, as is the case of the Reserve City Bank and Trust Company, 71 per cent of total assets are represented by loans and investments, the nonearning assets are, obviously, 29 per cent of the total. This high percentage of nonearning assets is attributable to required and excess reserves, to the book valuation of bank building and equipment, etc. In the case of the bank statement which is submitted to analysis, the assets, other than loans and investments, are more than three times as large as the total of the capital funds, while the loans and investments are nearly eight times as large as capital funds. It is apparent that the larger the percentage of earning assets to total assets the better is the earning prospect of the bank in question.

Reserve city member-bank ratios. — A comparison of the ratios computed from the condition reports of all reserve city banks with those of the Reserve City Bank and Trust Company on June 29, 1940, yields the results as shown in the table on the next page.

THE COMPOSITE STATEMENT OF THE MEMBER BANKS

The condition reports which member banks are required to submit periodically contain a more detailed breakdown of the assets and liabilities of banks than do the statements that they publish for the benefit of their customers and the general public. Table 23 shows the condition, on March 26, 1940, of all member banks, cen-

tral reserve city member banks, reserve city member banks, and country member banks. From this condition report, it is possible to derive certain ratios that cannot be computed by the customer of an individual bank from the typical bank statement which he can obtain from his bank. Certain of the more important ratios, however, have been computed for the Reserve City Bank and Trust Company. These can then be compared with the same ratios for all the member banks of the same classification.

	<i>Reserve city bank and trust company</i>	<i>All reserve city member banks</i>
1. Ratio of total deposits to capital funds.	10.3 : 1	9.1 : 1
2. Ratio of loans and investments to capital funds.	8 : 1	6.7 : 1
3. Percentage of investments to total loans and investments.	66.7%	56.4%
4. Percentage of cash plus cash due from other banks to total deposits.	28.2%	25.3%
5. Percentage of loans and investments to total assets.	71%	61.4%
6. Ratio of investments to time deposits plus capital funds.	1.35 : 1	1.11 : 1
7. Percentage of loans to demand deposits.	47.1%	40.5%
8. Percentage of time deposits to total deposits	30.2%	26.5%
9. Percentage of bank premises, etc., to capital funds.	16.2%	17%

One purpose for which this comparison might be made is to determine in what respects the condition of the individual bank is out of line with the composite statement of the group of banks of which it is a member. Of course, there may be very good reasons for the ratio of an individual bank statement being out of line with a ratio derived from the composite statement of a group of banks. It may be a sign of strength or a sign of weakness, on the part of the individual bank, when these two sets of ratios do not coincide.

Another purpose may be served by composite statements of different groups of banks. They make possible a comparison of typical differences between the central reserve city banks, the reserve city banks, and the country banks.

In addition to furnishing the assets and liabilities of all member banks, classified as central reserve city, reserve city, and country banks, the call reports give data on the condition of all member

TABLE 23. ALL MEMBER BANKS — CONDITION ON MARCH 26, 1940

BY CLASSES OF BANKS

(Amounts in thousands of dollars)

	All member banks	All national member banks	All State member banks	Central reserve city member banks		Reserve city member banks	Country member banks
				New York	Chicago		
<i>Assets</i>							
Loans (including overdrafts).....	13,930,408	9,038,281	4,001,127	3,211,095	564,172	5,304,505	4,859,636
United States Government direct obligations.....	11,313,710	7,003,008	4,249,802	3,685,522	1,180,104	4,100,618	2,341,376
Obligations guaranteed by United States Government.....	3,107,056	1,801,018	1,216,038	1,286,161	138,954	962,874	710,067
Obligations of States and political subdivisions.....	2,904,862	1,917,214	987,648	725,635	174,725	928,460	1,076,042
Other bonds, notes, and debentures, including obligations of Government corporations and agencies not guaranteed by United States.....	2,464,916	1,674,256	790,660	526,998	136,994	699,612	1,101,312
Corporate stocks (including Federal Reserve bank stock).....	433,105	217,862	215,243	158,950	27,146	150,868	96,141
Total loans and investments.....	34,163,057	21,802,539	12,300,518	9,504,301	2,222,185	12,153,937	10,103,574
Reserve with Federal Reserve banks.....	12,270,162	6,948,128	5,331,934	6,385,322	908,760	3,336,320	1,648,260
Cash in vault.....	862,162	622,890	239,263	83,786	25,186	364,479	388,711
Demand balances with banks in United States (except private banks and American branches of foreign banks).....	5,490,427	4,250,215	1,249,212	160,139	181,812	2,572,350	2,585,126
Other balances with banks in United States and foreign countries.....	157,902	114,511	43,391	16,238	14,538	65,175	61,951
Due from own foreign branches.....	3,400	2,590	810	810	.....	2,590	.....
Cash items in process of collection.....	1,561,722	985,523	576,109	568,419	100,161	670,953	213,189
Bank premises owned and furniture and fixtures.....	922,040	508,050	323,900	205,640	20,181	319,427	376,801
Other real estate owned.....	271,712	127,651	144,001	26,444	4,197	90,577	142,494
Investments and other assets indirectly representing bank premises or other real estate.....	132,005	66,980	65,025	11,437	831	91,645	28,002
Customers' liability on acceptances.....	97,936	52,118	45,818	68,597	3,513	24,079	1,777
Income accrued but not yet collected.....	105,442	63,485	41,957	34,066	9,203	43,522	18,591
Other assets.....	177,061	38,613	138,448	16,421	6,966	20,561	124,113
Total assets.....	56,233,037	35,673,311	20,559,726	17,174,150	3,506,615	19,766,615	15,782,679

banks of each Federal Reserve district and of each state. Thus the individual banker or bank depositor can compare the condition of his bank with the composite condition of all member banks in any district or state.

A further use of the condition reports of all member banks is that it enables the student of money, credit, and banking phenomena to compare the changes that have taken place over a period of time. These reports, covering all member banks throughout the country, are a more reliable measure of changes than the reports of a single bank or the banks of a certain city, state, or district. Since a later section of this book is devoted to an explanation of the organization of the money market and its control by the Federal Reserve banks and the Treasury, the condition reports of all member banks over a period of time will not be reproduced here. A few financial-statement ratios for all member banks in 1929 are mentioned here by way of contrast with the present situation.

On December 31, 1929, all member banks had deposit liabilities, exclusive of interbank deposits, in an amount only five times as large as their capital accounts. Their loans constituted 72.5 per cent of their total loans and investments. On the same date their cash and cash due from other banks were only 15 per cent of their total deposits. The vast changes which have taken place since 1929 in the composition of bank assets are apparent from a comparison of these ratios with those derived from present-day bank statements.

THE STATEMENT OF THE FEDERAL RESERVE BANKS

The Board of Governors of the Federal Reserve System publishes periodically a condition statement of all the Federal Reserve banks combined and of each of the twelve Federal Reserve banks separately. The large daily newspapers carry a summary of the changes in the condition of the Federal Reserve banks which occur during the week from the close of business on one Wednesday to the next. The *Federal Reserve Bulletin* carries these weekly figures for each of the Federal Reserve banks, and the annual report of the Board of Governors carries the year-end figures. The latter reports for 1938 and 1939 are reproduced as Table 24.

TABLE 24. STATEMENT OF THE CONDITION OF THE
FEDERAL RESERVE BANKS, END OF 1938 AND 1939

	<i>Total</i>	
	1939	1938
<i>Assets</i>		
Gold certificates on hand and due from U. S. Treasury . . .	15,199,120	11,787,720
Redemption fund — Federal Reserve notes	9,903	9,873
Other cash	315,194	368,213
Total reserves	15,524,217	12,165,806
Bills discounted:		
Secured by U. S. Government obligations, direct and guaranteed	574	2,099
Other bills discounted	6,191	1,872
Total bills discounted	6,765	3,971
Bills bought in open market		549
Industrial advances	11,044	15,644
U. S. Government securities, direct and guaranteed:		
Bonds	1,351,045	840,893
Notes	1,133,225	1,156,947
Bills		566,175
Total U. S. Government securities, direct and guar- anteed	2,484,270	2,564,015
Total bills and securities	2,502,079	2,584,179
Due from foreign banks	47	172
Federal Reserve notes of other Federal Reserve banks . . .	33,454	32,570
Uncollected items	867,206	710,849
Bank premises	41,749	42,768
Other assets	58,583	44,348
Total assets	19,027,335	15,580,692
<i>Liabilities</i>		
Federal Reserve notes in actual circulation	4,958,546	4,451,824
Deposits:		
Member bank — reserve account	11,653,232	8,724,050
U. S. Treasurer — general account	634,270	923,225
Foreign bank	397,443	199,211
Other deposits	255,836	241,512
Total deposits	12,940,781	10,087,998
Deferred availability items	776,665	694,217
Other liabilities including accrued dividends	2,558	2,998
Total liabilities	18,678,550	15,237,037
<i>Capital Accounts</i>		
Capital paid in	135,599	134,575
Surplus (sec. 7)	151,720	149,152
Surplus (sec. 13b)	26,839	27,264
Other capital accounts	34,627	32,664
Total liabilities and capital accounts	19,027,335	15,580,692

TABLE 24. STATEMENT OF THE CONDITION OF THE FEDERAL RESERVE BANKS, END OF 1938 AND 1939 — *Continued*

	<i>Total</i>	
	1939	1938
Contingent liability on bills purchased for foreign correspondents.....		76
Commitments to make industrial advances.....	9,070	14,272
<i>Federal Reserve Note Statement</i>		
Federal Reserve notes:		
Issued to Federal Reserve bank by Federal Reserve agent.....	5,274,522	4,790,047
Held by Federal Reserve bank.....	315,976	338,223
In actual circulation	4,958,546	4,451,824
Collateral held by agent for notes issued to banks:		
Gold certificates on hand and due from U. S. Treasury	5,371,000	4,888,000
Eligible paper.....	1,365	3,397
Total collateral held.....	5,372,365	4,891,397

Source: *Annual Report of the Board of Governors of the Federal Reserve System*, 1939, pp. 34-35.

The most important information which is revealed by the condition reports of the Federal Reserve banks is the change that has taken place from one date to another in the volume of (1) gold certificates held by the Reserve banks, (2) bills discounted and bought in the open market, (3) United States government securities held by the Reserve banks, (4) deposits of member banks and the Treasury, (5) the capital account of the Reserve banks, and (6) Federal Reserve notes and their security.

These condition reports reflect the action of the Federal Reserve authorities in their open-market operations and in their dealings with the member banks and the Treasury. Since many of these activities are associated with attempts to control the money market, the specific ways that these activities are carried out is made a part of the subject matter of another part of this book. Only a few comments on each of the chief elements in the Federal Reserve statement are attempted here.

1. The gold certificate account of the Federal Reserve banks indicates their claims against the United States Treasury. These gold certificates are not in general circulation; they represent the

gold bullion which has been turned over to the Treasury by the Federal Reserve banks. The bulk of the reserves of the Reserve banks is, therefore, no longer in the form of gold bullion, but in gold certificates. The increase in the gold certificate account in 1938 and 1939 reflects, chiefly, the great amount of gold imports during those years.

2. The volume of bills discounted by the Federal Reserve banks for the member banks sometimes shows changes in the volume of loans of the member banks to their customers. Member banks may increase their borrowings from the Federal Reserve banks in periods of great business activity and retire a large part of that indebtedness in periods of decline in business activity. In 1937, however, the increase in indebtedness of the member banks to the Reserve banks is to be attributed largely to the increase in the reserve requirements imposed upon the member banks. In 1938, this adjustment had been completed and such member-bank indebtedness declined. More than half of the bills discounted for member banks were secured by United States government securities, rather than by commercial paper. The change in this aspect of Federal Reserve operations for 1939, as compared with 1938, is shown by Table 24.

3. The Federal Reserve banks increased their holdings of long-term United States government securities in 1939 and decreased their holdings of Treasury bills and notes. This move was made to support the market for government bonds when the market was temporarily weak.

4. The deposit liability of the Federal Reserve banks consists largely of the reserve accounts of the member banks and the general account of the United States Treasurer. As the deposit liabilities of the member banks change in volume, the legal reserves of the member banks must necessarily change, in the absence of a change in the ratio of required reserves. Whether an increase in the deposits of member banks results in an increase in the deposit liability of the Reserve banks depends on the extent of the excess reserves of the member banks. If the excess reserves are large at the time an increase in bank deposits occurs, an increase in the total reserve account of the member banks may not be necessary in order to meet the larger amount required to be held as legal reserves since, in this case, a larger proportion of the total reserves would be required reserves and a smaller proportion would be excess reserves.

5. The capital account of the Federal Reserve banks changes slightly from year to year as the capital and surplus of member banks increase and decrease and as the earned surplus and other capital accounts of the Reserve banks change. The amount of Federal Reserve bank stock which a member bank is required to purchase is 3 per cent of the capital stock and surplus of the member bank. Except in periods of great bank failures, this amount does not change abruptly. The surplus of the Reserve banks likewise is not ordinarily a very important factor in determining the supply of funds made available to the money market.

6. One of the most interesting changes that has taken place in the Federal Reserve bank statement is the trend in the past decade which makes the Federal Reserve notes virtually gold certificates. At present the Federal Reserve agents hold gold certificates in an amount in excess of the amount of Federal Reserve notes in actual circulation. The commercial paper security against them is negligible in amount today, whereas in the earlier years of the Federal Reserve System such security was a most significant element in Federal Reserve note issue. An amendment to the Federal Reserve Act, for a time, permitted the issuance of these notes on government-bond collateral. At present no government securities are held as collateral for Federal Reserve notes.

BANK EARNINGS AND EXPENSES

The significance of profits. — Banks are formed, from the point of view of the individual banker, to earn profits for their owners. From a broader, social point of view as well, banks must be profitable because their economic functions cannot be performed satisfactorily by insolvent institutions. It may be admitted that frequently profit motive and social welfare are in conflict, yet the two must approximate each other if our economic system is to operate in such manner as to achieve a high degree of general well-being. Since banking is a field of activity affected with a public interest in larger measure than most other private enterprises, it is particularly important that the individual and social points of view in banking should coincide. Whether this happy state is realized in large or small part, no one should begrudge the bankers a fair return on their investment.

Factors affecting bank earnings. — The Research Council of the American Bankers Association published a study in January 1939, *The Earning Power of Banks*,¹ in which it reviewed the major modifications that have occurred in banking operations in recent years. This study classified the forces that have affected the earning power of banks into (1) changes outside of banking and (2) changes inside of banking. An example of the external forces is the curtailment of the volume of commercial credit of all kinds employed by industry and trade. An example of the internal forces is the great replacement of loans by investments in the total earning assets of banks. These two types of forces are, of course, interrelated.

A transformation in earning assets. — The study of the Research Council of the American Bankers Association points out the persistent decline in the ratio of loans to total loans and investments and the changes in the loan accounts of commercial banks. It also finds a significant change in the investment accounts of banks. The changes in the loan ratio are presented here in tabular form:

<i>Average for period</i>	<i>Percentage of loans</i>	<i>Percentage of investments</i>
1923-29	71	29
1930-33	63	37
1934-37	44	56

The changes within the loan account to which this study calls attention are represented by the following figures:

<i>Average for period</i>	<i>Percentage of commercial loans</i>	<i>Percentage of collateral loans</i>	<i>Percentage of real estate loans</i>
1923-29	66½	25½	8
1930-33	50½	32½	17
1934-37	48	31	21

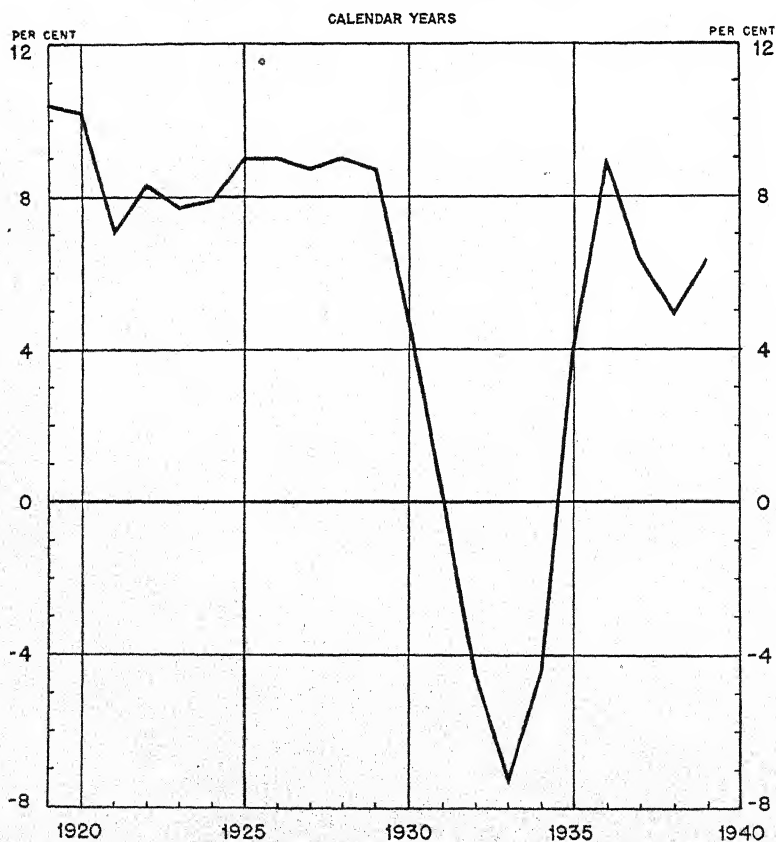
¹ Published by the Research Council of the American Bankers Association, 1939, Leonard P. Ayres, Chairman.

The most important change in the investment account of commercial banks is the great increase in the proportion of federal government obligations to total investments:

<i>Average for period</i>	<i>Total bond account average</i>	<i>Average percentage of United States government obligations</i>
1923-29	\$12,000,000,000	29
1930-33	14,000,000,000	39
1934-37	20,000,000,000	57

CHART 6

**MEMBER BANK PROFITS
AS A PERCENTAGE OF TOTAL CAPITAL ACCOUNTS**



Source: *Federal Reserve Bulletin*, May 1940, p. 395.

Yields on bank earning assets. — The same study finds that the banks suffered a great percentage decline in the more lucrative types of earning assets. The greatest increases have occurred in that type of earning asset which yields a lower return. The following schedule shows the percentage returns from various types of loans and investments from 1923 to 1937:

Average for period	Com- mercial paper	Bankers' accept- ances	Stock Exchange loans	High grade bonds	Treasury notes	United States Bonds	Customers' rates		
							New York City	North- eastern cities	South- western cities
1923-29	4.6%	3.8%	4.9%	5.4%	3.5%	3.8%	4.9%	5.3%	5.8%
1930-33	2.7	1.5	2.0	5.9	1.1	3.4	4.4	4.9	5.6
1934-37	.9	.2	.9	4.4	.2	2.7	2.7	2.7	4.6

The Research Council expresses the opinion that

... these changes in the productiveness of the major sources of the operating income of the banks may contain a considerable element of permanence. If this is true and offsetting factors do not appear, an early return to the former conditions on which the present banking structure was predicated is not to be expected. In that case it would seem that the solution of the problem which therefore confronts the banks would be along the line of further operating adjustments. These would include searching bank-wide cost-accounting methods, the reduction of departmental expense ratios to a minimum through the exercise of stringent operating prudence and economies, and the development of new sources of income.²

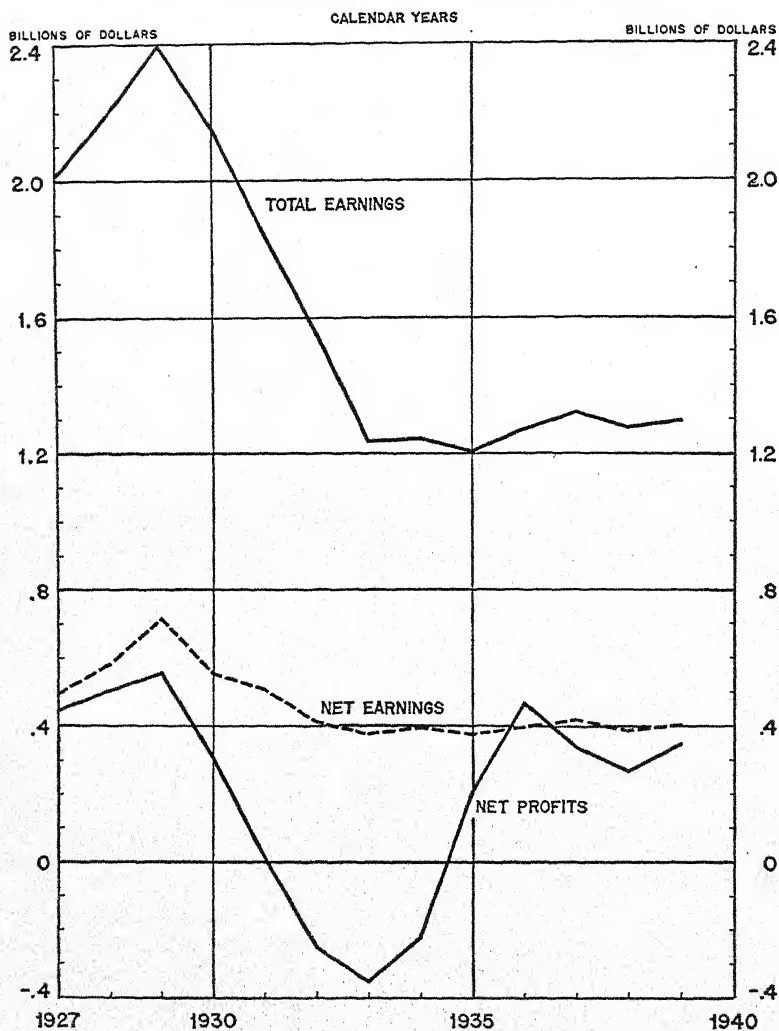
Changes in operating ratios. — Table 25 shows the complete operating statement of all member banks in selected years from 1929 to 1939. These data, taken from the annual reports of the Board of Governors and from the *Federal Reserve Bulletin*, are accompanied by the following explanation:

It should be borne in mind in using them that the statistics employed represent aggregates for all member banks reporting on the various dates, and the ratios are therefore ratios of aggregates in which figures for large banks have a statistical influence somewhat disproportionate to their number in comparison with the figures for small banks.

Earnings. — The data presented show that member banks suffered a great decline in the income from their loan accounts; the ratio of such income to each \$100 of loans and investments fell from

² *Op. cit.*, pp. 20-21.

CHART 7
MEMBER BANK EARNINGS AND PROFITS



Source: *Federal Reserve Bulletin*, May 1940, p. 395.

\$4.38 in 1929 to \$1.71 in 1939. In absolute figures the decline was from \$1,563,000,000 to \$560,000,000. This loss was partially offset by an increase in income on investments, but the total earnings, nevertheless, fell from \$2,399,000,000 in 1929 to \$1,296,000,000 in 1939. The amount earned per \$100 of loans and investments fell from \$6.71 to \$3.96.

Expenses. — The decline in the income of banks from loans and investments forced them drastically to curtail their outgo for operating expenses. The absolute figures show a decline in total expenses from \$1,684,000,000 in 1929 to \$895,000,000 in 1939. Bank consolidations and failures account for a part of this decline. The ratio figures, however, reveal a drop in expenses from \$4.71 to \$2.73 per \$100 of loans and investments. By reason of this curtailment of operating expenses, the decline in net earnings from current operations was not so great as was the decrease in total earnings from current operations. The net income from current operations, however, fell from \$2 to \$1.22 for each \$100 of loans and investments.

Losses and recoveries. — One of the factors that has made for considerable variation in bank earnings in recent years has been the losses and depreciation compared with amount of recoveries and profits on securities. In 1932, 1933, and 1934, banks suffered a net loss on their operations as a whole because of heavy losses on loans and investments. In 1936, they experienced recoveries and profits on securities in excess of their losses on loans and investments. This factor aided banks in showing net profits of \$1.48 per \$100 of loans and investments in 1936 as compared with a net loss of \$1.42 in 1933. Recoveries have not exceeded losses in any year since 1936.

Other ratios. — From the point of view of the stockholder of a bank, the most important ratio is the net profit per \$100 of capital funds. In 1929, member banks earned, on the average, \$8.75 per \$100 of capital funds, which figure has been exceeded in only one year since that time, namely, 1936. In 1933, these banks suffered a net loss of \$7.26 on each \$100 of capital funds, and in 1939 they experienced a net profit of \$6.33. The explanation for these extreme fluctuations in bank earnings is found in the other ratios that are appended to Table 25.

The effects of the changes in the composition of member-bank assets and variations in the rates of income from different sources are presented in Charts 6, 7, 8 and 9.

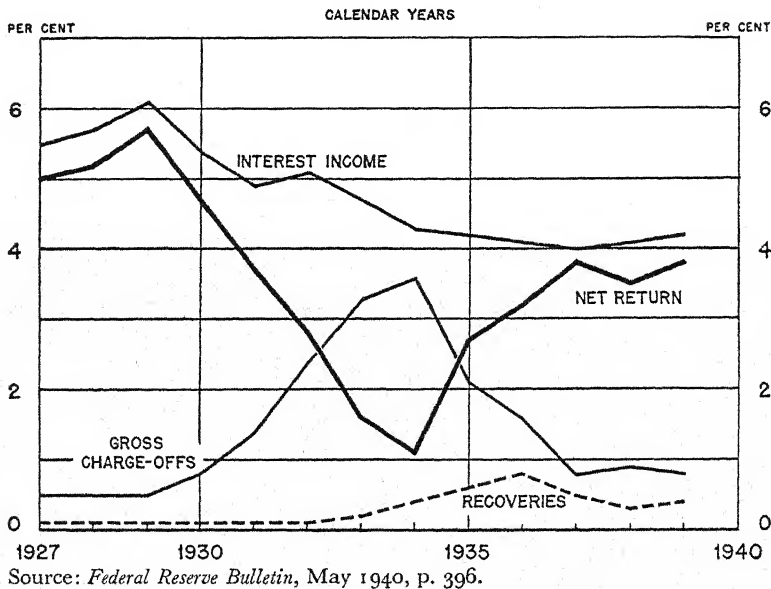
TABLE 25. OPERATING RATIOS OF MEMBER BANKS PER \$100 OF LOANS AND INVESTMENTS IN SELECTED YEARS

	1929	1933	1937	1938	1939
<i>Earnings:</i>					
Interest and discount on loans.....	\$4.38	\$2.42	\$1.70	\$1.72	\$1.71
Interest and dividends on investments...	1.32	1.71	1.48	1.42	1.36
Interest on balances with other banks...	.09	.03	.....	.....	.....
Collection charges, commissions, fees, etc.	.17	.10	.10	.10	.10
Foreign department.....	.07	.09	.04	.03	.04
Trust department.....	.22	.24	.30	.28	.28
Service charges on deposit accounts.....			.14	.16	.17
Rent received.....	.46	.37	.26	.27	.25
Other current earnings.....			.06	.06	.06
Total current earnings.....	6.71	4.95	4.06	4.04	3.96
<i>Expenses:</i>					
Interest on deposits — total.....	2.03	1.15	.56	.54	.49
Salaries, officers.....			.44	.46	.46
Salaries and wages — employees.....	1.30	1.22	.71	.74	.73
Fees paid to directors and committees...			.02	.02	.02
Interest and discount on borrowed money	.18	.06	.....	.....	.....
Real estate taxes.....			.11	.11	.11
Other taxes.....	.31	.23	.16	.15	.15
Other expenses.....	.79	.77	.79	.79	.78
Total current expenses.....	4.71	3.44	2.78	2.82	2.73
Net earnings from current operations....	2.00	1.51	1.29	1.22	1.22
<i>Recoveries, Profits on Securities, etc.:</i>					
Recoveries on loans.....	.07	.12	.23	.14	.17
Recoveries on investments.....			.15	.17	.17
Profits on securities sold.....	.27	.32	.30	.48	.58
All other.....	.05	.06	.10	.09	.08
Total.....	.39	.50	.79	.89	1.00
<i>Losses and Depreciation:</i>					
On loans.....	.39	1.70	.32	.39	.33
On investments.....	.27	1.38	.46	.58	.55
On banking house and fixtures.....	.09	.14	.11	.13	.12
All other.....	.08	.21	.15	.17	.17
Total losses and depreciation.....	.83	3.43	1.04	1.26	1.16
Net Profits or Net Loss (—).....	1.56	—1.42	1.04	.84	1.06
<i>Other Ratios</i>					
Net profit, or net loss (—) per \$100 of capital funds.....	8.75	—4.50	6.32	4.93	6.33
Interest and discount on loans per \$100 of loans.....	6.10	5.08	4.00	4.08	4.19
Losses on loans per \$100 of loans.....	.54	2.41	.76	.92	.81
Interest and dividends on investments per \$100 of investments.....	4.68	3.89	2.57	2.46	2.29
Losses on investments per \$100 of investments.....	.94	2.59	.79	1.00	.93
Interest on time deposits per \$100 of time deposits.....	3.34	2.80	1.55	1.48	1.36
Time deposits per \$1 of capital funds....	5.86	5.11	7.81	7.71	8.41
Loans and investments per \$1 of capital funds.....	5.62	5.04	6.10	5.86	5.97

Source: *Annual Report of Board of Governors*, 1937, pp. 140-141, and *Federal Reserve Bulletins*, May 1939, p. 374; May 1940, p. 460.

New sources of income. — The Research Council of the American Bankers Association has suggested three methods whereby banks may partially adapt themselves to the conditions that limit the earning power of banks. These are: (1) the adoption of bank-wide methods of cost accounting, (2) the reduction of department-expense ratios, and (3) the development of new sources of income. Only the last of these will be considered here.

CHART 8
INCOME FROM LOANS
 AS A PERCENTAGE OF TOTAL LOANS



Intermediate capital loans. — Intermediate capital loans are ordinarily defined as loans with maturities ranging from one to five years. They are most frequently repayable in instalments and are usually secured by first mortgages, chattel mortgages on equipment, accounts receivable, marketable securities, etc. Prior to recent years, these loans were not favored because they were not regarded as self-liquidating and were not rediscountable at the Federal Reserve banks. At the present time, however, the Federal Reserve banks may, in effect, underwrite them when they are made

for working-capital purposes. The Federal Reserve banks may participate up to as high as 80 per cent of the loan. Thus they furnish one field for procuring acceptable earning assets, especially in view of the somewhat higher rates that banks charge on this type of loan, as compared with the ordinary commercial loan.

The volume of intermediate capital loans made by banks is not high at the present time. The demand for them is great but most of the applicants are not considered good risks for long-term financing. The surveys of the Research Council, however, reveal a satisfactory experience with the loans of this character which have been granted.

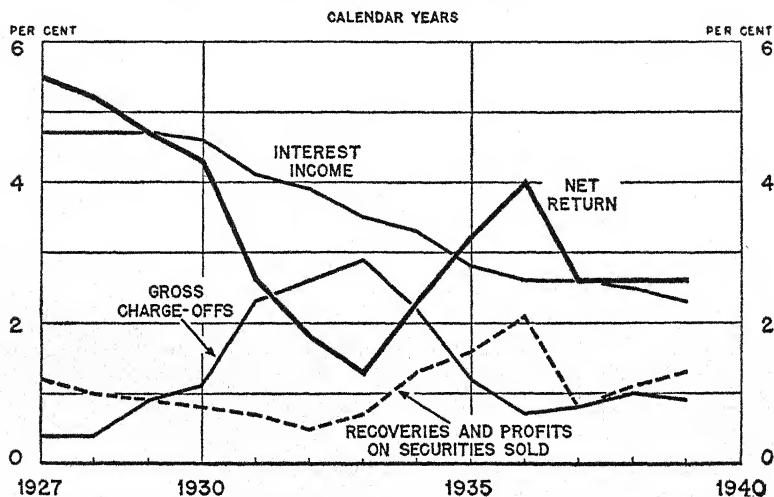
Personal loans. — Since this topic is set aside for later treatment, it is sufficient to observe at this point that the experience of most banks with small personal loans has been satisfactory. The survey of the Bank Management Commission and Savings Division of the American Bankers Association showed that losses were kept well under 1 per cent, and that the net income to the banks on loans of this type ranged from about 4 to 10 per cent or more a year. The personal loan, therefore, offers another possible escape from low-yield earning assets.

Service charges. — In recent years, service charges on deposit accounts have attracted increased attention from bankers as a means of checking the decline in the total current earnings of commercial banks. Many banks have met a large share of their operating expenses with income from this source. The present trend seems to indicate that service charges will soon become the largest source of gross income outside that procured from loans and investments. Since 1933, gross earnings from service charges on deposit accounts have increased from \$20,574,000 to \$50,553,000 in 1938. A preliminary report for the first half of 1939 indicates at least a 10 per cent growth in income from this source for 1939 as compared with 1938.

According to figures published by the Federal Reserve Bank of New York, the gross income from service charges equalled 14 per cent of net profits of the banks in its district in 1936, 31 per cent in 1937, and 59 per cent in 1938. Lest these percentage figures be misleading, it should be remembered that the net earnings of banks in 1936 were unusually great, which would make the proportion of net profits represented by gross income from service charges partic-

ularly low for that year. In a year that bank earnings are low this percentage figure would be very high, even though the total income from service charges had not increased over previous years. Nevertheless, service charges have become a source of income which has enabled banks to adapt themselves to the conditions limiting their earning power.

CHART 9
INCOME FROM SECURITIES
AS A PERCENTAGE OF TOTAL SECURITIES



Source: *Federal Reserve Bulletin*, May 1940, p. 397.

Summary. — The summary statement of the study *The Earning Power of Banks*, published by the Research Council of the American Bankers Association, serves admirably as a summary of this chapter. A part of it is reproduced here:³

Under existing conditions commercial banks generally find it possible to obtain employment for only a relatively small proportion of their loanable funds in those types of loans to industry and trade which long constituted their chief sources of income.

The force of circumstances has made it necessary for them to accept employment for a large part of their loanable funds in investment securities, particularly in U. S. Government obligations which constitute more than half their total investment account.

³ pp. 77-78.

These changes have been accompanied by substantial reductions in interest rates on loans and in yields on investments and these factors have seriously impaired the rate of income of banks from these major sources of their earnings.

In this fall in interest rates customary economic factors have been accentuated by a number of special circumstances. Fundamental changes in the prevailing business habits of the nation have brought about a great reduction in the use of commercial credit. Popular, political and Governmental attitudes toward interest and financial institutions and practices tend to retard a restoration of the returns on moneyed capital to former levels.

In view of these modifications in the conditions under which banks now function, and which promise to continue in force, it would appear that the innovations which are developing in bank operating methods and loaning policies are necessary.

It is recognized, however, that this is a period of transition which imposes upon commercial bank management special requirements of judgment and caution. This would appear to apply especially to the field of capital assets which now enter largely into bank earning assets.

It would seem advisable that commercial banks qualify themselves to handle enlarged investment accounts as a source of earnings equally as important as commercial loans.

It would also seem advisable for banks to study the possibilities in their respective communities for extending broadened loan facilities to the public as a means of strengthening their income. These would include systematic methods for granting capital loans, the making of personal or instalment credit loans and the origination of and investment in amortized first mortgage loans, as well as efforts to stimulate an increase in their commercial loans.

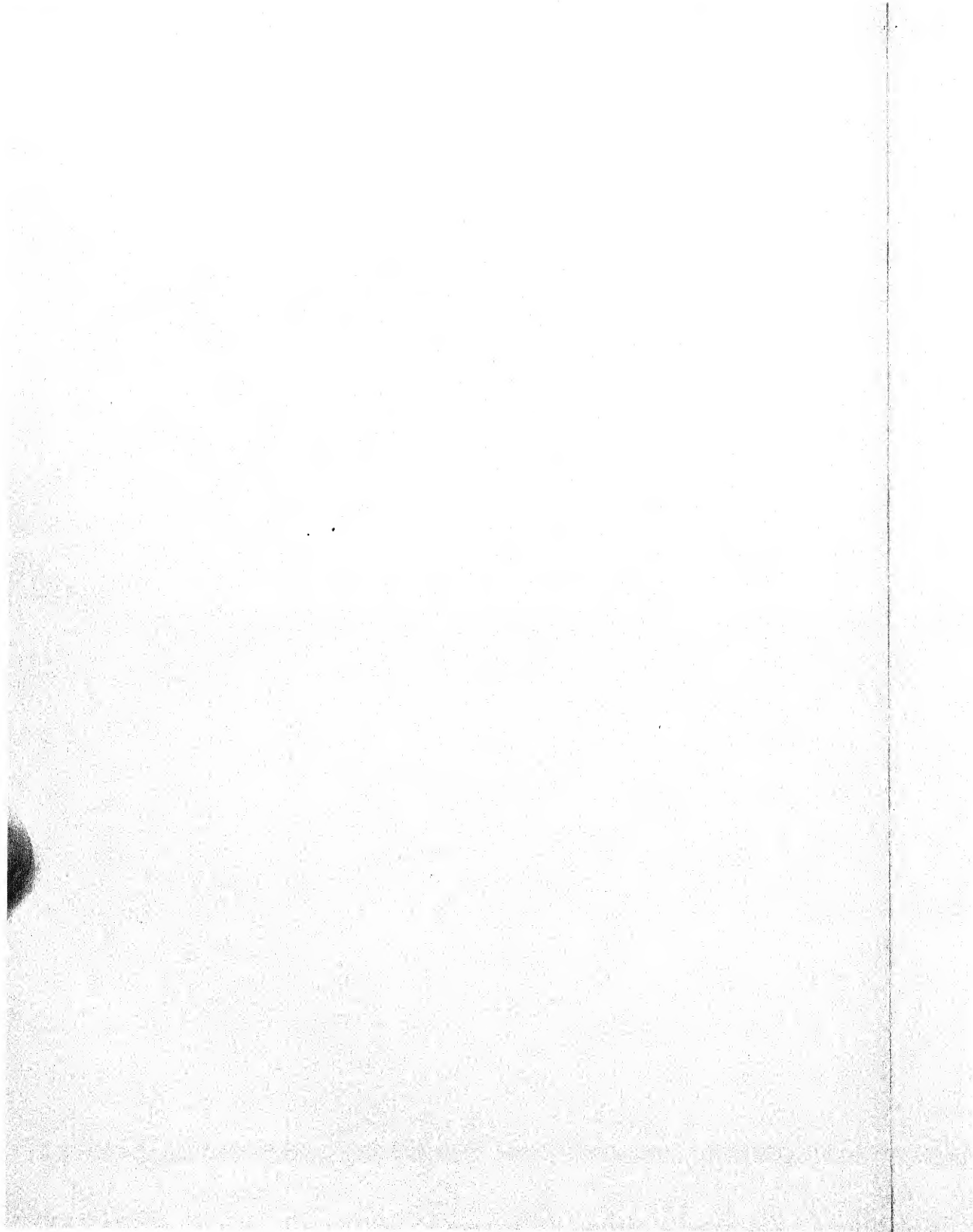
Narrowed profit margins also indicate the necessity for seeking increased income through adequate fees for specialized services and through sound plans for determining service charges on checking accounts.

Also the narrowed margin between operating earnings and costs makes imperative the practice of detailed departmental cost accounting, analysis and control with a view of determining the profit or loss which each phase of a bank's operations contributes to its earning power and of eliminating weaknesses which may appear in any department.

SUGGESTIONS FOR FURTHER READING

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PART FOUR
NONCOMMERCIAL BANKING



CHAPTER XVI

FIDUCIARY SERVICES RENDERED BY BANKS

Introduction. — The main functions of commercial banking are the accepting and safeguarding of demand deposits subject to check and the lending of funds to meet short-term credit needs. In addition to these, with the growing departmentalization of banking and with fundamental changes occurring in our economic institutions, a number of other services are being rendered — (1) performing fiduciary or trust services, (2) accepting time deposits and engaging in long-term lending, (3) distributing investment securities, and (4) making consumers' loans in the form of personal loans. The trend toward departmentalization in banking may readily be seen from an analysis of bank earnings recently made by the Federal Reserve Bank of New York. According to this analysis, the earnings of twenty-three large New York City banks in 1938 were derived from the following sources in the proportions indicated: ¹

Interest and discount on loans	35 %
Interest and dividends on securities	33
Service charges on deposit accounts	3
Trust department and other earnings	29
	<hr/>
	100 %

These figures are not entirely representative of the entire national banking situation, in view of higher interest rates and a greater percentage of consumers' loans in other regions, notably the Pacific Coast, but they nevertheless illustrate adequately the importance of sources of income other than those formerly considered to be within the sphere of commercial banking.

Changes in banking. — The entire field of economic activity has undergone fundamental changes as a consequence of the national and international developments of the last decade. Probably no business has been more greatly affected by these

¹ "Banking as a Business," *The Index*, The New York Trust Company, Vol. XIX. Winter 1939, pp. 63-74.

changes than banking. Contrasting conditions today with those of the decade after the World War, a combination of factors such as a tremendous volume of excess reserves, an insufficient number of suitable loan and investment opportunities, and an ever-increasing volume of government financing, have brought interest rates to a point at which banks are forced to seek other sources of income. In part, fundamental changes which have occurred within the business structure are also responsible for the situation confronting banking; corporations are relying less today on short-term borrowing and are often in a position to supply their own capital needs from accumulated funds. To offset the effects of their inability to make commercial loans in the customary amounts, and of lower interest rates, banks have sought other forms of earning assets and attempted to counterbalance lower returns by structural changes within the banks themselves.

At first, a great number of banks increased their diversification of activities by seeking to render, under one roof, any type of financial service likely to be desired by potential customers. A marked increase occurred in the volume of business conducted by the trust, real estate, and foreign departments of banks. Temporarily, the security affiliate appeared;² the number of branch offices and safe deposit companies increased. Mergers were carried out in order to reduce expenses and to profit by the advantages

² The first security affiliate was established in 1908 by the First National Bank of New York City. It was organized as a corporation possessing general powers with a capitalization equal to that of the bank. A cash dividend of 100 per cent was thereupon declared by the bank which was, however, not disbursed to the stockholders. Instead this amount was subscribed to the stock of the security corporation, making it fully paid. These stock certificates then were deposited under a trust of which officers of the bank were made trustees. In recognition of this transaction, the stock certificates of the bank's shareholders were provided with a statement that they possessed an interest in an equal number of shares of the security affiliate.

In addition to this method, banks provided capital for their security affiliates by (1) organizing an affiliate as a subsidiary of the bank through subscription to its shares, (2) offering new bank stock to present shareholders at a considerable premium, which was used to subscribe to the stock of the affiliate, and (3) direct offering of stock in the security affiliate to the bank's shareholders. The importance of the affiliate in the post war period may be seen in the increasing proportion of originations and participations in new security issues undertaken by commercial banks. In 1930, commercial banks accounted for almost one-half of the originations of new issues and of over three-fifths of the participations in new issues. The Banking Act of 1933 prohibited commercial banks from engaging in underwriting or dealing in securities. Moreover, no officer of a commercial bank could be associated with any institution, except mutual savings banks, which obtained loans on stocks or bonds. The latter provision was, however, partly repealed by the Banking Act of 1935.

inherent in increased size. Some banks, however, preferred to eliminate services previously rendered and to specialize in a particular field, for example, trust work.

Today, as a result of liberal discount facilities extended by the Federal Reserve System and a strong cash position of many business firms, many banks extend term loans, that is, loans extending beyond the seasonal needs of a business. Under the Banking Act of 1935, an increased volume of real estate loans has been made possible and, as a result of the willingness of the Federal Housing Administration to guarantee loans for the construction of private homes up to 90 per cent of the total, many commercial banks have increased their volume of such loans.

Personal loan business and the direct and indirect financing of instalment purchases of durable consumer goods constitute an increasing percentage of total bank earnings. Service charges are also being called upon to remedy an unsatisfactory earning position. Without doubt, bank management is alert to new conditions, trying to introduce new bank services and to tap new sources of income. In addition, severe economy is practised to reduce operating expenses.

From the preceding paragraphs, it is clear that there exists today little specialization on the part of financial institutions. In the following chapter, we shall see that savings institutions perform a considerable volume of commercial banking business. The commercial bank is a hybrid institution, extending credit for consumptive as well as for productive purposes, and granting accommodations for working-capital as well as for fixed-capital purposes. It also maintains bond, foreign, insurance, savings, and trust departments. Trust companies, as will be pointed out in this chapter, engage in a great variety of trust business, in addition to commercial and investment banking.

The corporate fiduciary. — Modern trust institutions have developed along distinctive lines. They are corporations rendering, generally speaking, three distinct types of fiduciary services to three different groups of customers. (1) Property is assembled, charges against it are paid, and the balance is distributed in accordance with the law, (2) property is administered, and (3) agency agreements are performed with respect to property. Such services are rendered for individuals, partnerships and private corporations,

and public or semipublic institutions. Even when a corporation is engaged in other types of financial business, it is none the less a trust institution. The overwhelming majority of trust institutions are also engaged in banking. There are trust companies with commercial banking departments and there are commercial banks with trust departments. However, only about one-fourth of the commercial banks at the present time render fiduciary services. A financial institution which carries the name "trust company" is not *ipso facto* a trust institution. Many so-called trust companies are not authorized by law to accept trust business. On the other hand, there are many corporate trustees which do not indicate their fiduciary activity by the word "trust" in their corporate title. In most states, a corporation possessing the charter power to engage in trust business, must obtain a license to solicit and accept trust business. A national bank receives its license from the Board of Governors of the Federal Reserve System; a state bank receives it usually from the state banking department.

It is, however, quite erroneous to assume that only corporations are legally or physically in a position to perform trust functions. Under the law, individuals may do so. Until about a hundred years ago, fiduciary services were rendered exclusively by individuals. In recent years the individual trusteeship has gradually disappeared and has been replaced by the corporate fiduciary. The reason for the phenomenal growth of the corporate trustee is, first of all, that the rendering of trust services is a hazardous occupation, particularly for an individual. Trust business is characterized not only by great uncertainty, litigation, and lack of adequate judicial decisions, but also by the necessity for able investment and legal counsel to assure successful performance. Many an individual trustee has sustained losses, unaware of the fact that the law will often hold him personally responsible for injuries suffered by deliverymen, visitors, or passers-by in or near a building under his administration.

From the point of view of the individual in need of a service in regard to his property which extends beyond his lifetime, another problem presents itself. It is often difficult to find an individual trustee who possesses the business ability and unquestionable integrity necessary for the successful execution of such a task. Even when an individual is found who combines all these qualities,

still another difficulty is encountered. Frequently individual trustees, in view of their other duties, are not available when their services are required on behalf of the estates which are entrusted to them. A statute can assure financial responsibility to a large degree, but it cannot assure constant availability. Only a corporation can meet all the requirements essential to successful trusteeship.

There are thus many reasons for choosing a corporate trustee in preference to a personal one.

1. The contingency of death or physical incapacity of an individual may bring about sudden termination of a contract, necessitating the appointment of a new trustee with a consequent disruption of administration. A corporation enjoys a degree of *permanency* not possessed by an individual.

2. The trained staff of a trust institution assures a *high degree of efficiency* in the administration of the trust. Investment guidance is given by specially trained individuals or by the investment officers of a bank. In addition to investment ability, legal knowledge concerning wills, duties of an executor, taxes, etc., is essential to an efficient administration. A trust man not trained in the law is all too apt to believe that an action morally right must therefore be legally right.

3. The *greater financial responsibility* of a trust institution affords more adequate protection against fraudulent practices by an employee of the trustee than is the case with the individual trustee. In addition to the courts which exercise jurisdiction over both individual and corporate trustees, state and national governments also supervise trust institutions. Under the Federal Reserve Act as amended, national banks exercising trust functions must segregate all assets held in trust from their general banking assets and maintain separate books and records showing in detail all transactions. The states have passed similar provisions. Periodic examinations are made by state banking authorities, the Federal Reserve System, the Comptroller of the Currency, and the Federal Deposit Insurance Corporation. This assures not only a high degree of safety, but also gives institutions the benefit of many constructive suggestions by the examining agencies.

4. Another assurance of satisfactory service is the fact that a trust institution has a *reputation to maintain*. It is engaged in the business of rendering fiduciary services and, in view of the competitive

nature of the trust business, can only continue to do so by rendering acceptable service.

Trust business of commercial banks.—The granting of fiduciary powers to national banks was first proposed in 1906. Under the Federal Reserve Act of 1913 national banks received trust powers. Under this act as amended, a state cannot prevent a national bank from rendering fiduciary services, provided it has given such powers to its own banks and trust companies. Section 11-K of the Federal Reserve Act as amended authorizes the Board of Governors of the Federal Reserve System

... to grant by special permit to national banks applying therefor, when not in contravention of State or local law, the right to act as trustee, executor, administrator, registrar of stocks and bonds, guardian of estates, assignee, receiver, committee of estates of lunatics, or in any other fiduciary capacity in which State banks, trust companies, or other corporations which came into competition with national banks are permitted to act under the laws of the State in which the national bank is located.

This federal authorization was at first attacked by the trust companies as being an unconstitutional exercise of power by Congress. Several state courts supported this contention in 1915 and 1916. However, upon appeal to the Supreme Court of the United States, congressional authority to give trust powers to national banks was upheld on the principles laid down by Chief Justice Marshall in the *McCulloch versus Maryland* case, which upheld the constitutionality of the Second Bank of the United States.

On December 31, 1939, one thousand eight hundred and seventy-three national banks, possessing combined assets representing about 85 per cent of total national bank assets, held permits to perform fiduciary services. A considerable number of them have added the words "trust company" to their former titles.³ National banks exercising trust functions constitute today more than one-half of the trust institutions in the United States.

The phenomenal growth of trust institutions may be largely attributed to certain inherent advantages offered by the non-specializing financial institution. By sharing the expenses for the maintenance of a common business establishment and other

³ The above number does not include national banks exercising restricted trust powers only. At times, a bank is authorized to acquire certain trust accounts, but not to solicit additional fiduciary business. This is often made necessary to enable consolidated institutions to acquire the trust business held by a predecessor bank.

economies, trust service has been made possible. In most instances, compensation for trust work is received upon its completion so that earnings during the development period tend to be small. The rendering of certain fiduciary services is also often expected by customers of commercial banks or banking departments so that the existence of a trust department operating at a loss nevertheless increases the earnings of other departments in the institution. Unless an institution immediately upon entering into the field receives one or more very large accounts yielding an immediate income (a situation that is rather unusual) a trust business cannot maintain itself during the initial period. Even later, only an institution located in or near centers of population and wealth can sustain itself in view of the low compensation per unit of property administered. For these reasons, the trust institution must have a sustaining associate during its early development. Commercial banking seems to fill the role of such a sustaining partner. A study made by the Trust Division of the American Bankers Association showed that almost 95 per cent of the first 1,000 banks and trust companies replying to questionnaires did not possess sufficient earnings in their trust departments to warrant the maintenance of a separate trust institution.⁴

Arguments are, however, presented in favor of dissociation of trust business and commercial banking; they are based primarily upon two major premises: (1) A conflict of interest is apt to arise upon occasion between the two functions and (2) confidence of customers is increased by the separation of commercial banking and fiduciary business. When the question of granting trust powers to national banks was argued, the problem was reviewed in detail. The evidence presented seemed to illustrate a natural affinity between commercial banking and trust functions. The hesitation on the part of the government to force the issue of dissociation seems to offer another proof of this relationship. It would, indeed, be difficult to raise sufficient capital for separate trust institutions as long as prospective earnings are as small as they are in trust work.

Trust companies. — As a rule, state laws did not originally give to trust companies express powers to engage in commercial

⁴ Remington, John W., *Trust Business in the Future — Its Association with Banking*, p. 73. New York: American Bankers Association, 1938.

banking operations, but in view of this natural affinity between trust and commercial banking operations, these institutions gradually usurped discount and deposit functions to augment their income. For a number of decades, commercial banks fought this competitive threat, just as later trust companies opposed the invasion of the trust field by the commercial institutions. At first, state courts were inclined to view commercial banking as being outside the legitimate field for the operation of trust companies, but they proceeded later to accept the change as more or less inevitable.

Except in connection with the banking departments, trust companies have enjoyed a much greater degree of freedom from legal requirements with regard to capital, loans, and investments than have either state or national banks. The State of Tennessee, for example, permitted the investment of trust funds in the securities of any foreign government maintaining diplomatic relations with the United States. Other states permitted corporate trustees to invest in railroad stocks or county and municipal bonds without establishing any rules concerning such an investment problem as relation of debt to assessed valuation or the question of overlapping debt. The state of New York, which established legal lists for the investments of savings banks, "threw open to a wide degree, the throttle of safety of the machinery of the law, for the protection of testamentary trusts and guardian funds."⁵ Despite such lax regulations, losses as a result of failure on the part of trust companies have not been very impressive compared with those of national commercial banks.

Under the Banking Act of 1933, the Comptroller of the Currency or the Federal Reserve banks must examine all corporations, associations, or business trusts receiving deposits and must publish periodic reports. Moreover, the Trust Indenture Act of 1939 brings certain trust indentures under the supervision of the Securities and Exchange Commission. There is, of course, the danger that legislation will increase the obligations and hence the risks of trustees to such proportions that institutions will no longer feel

⁵ Edwards, George W., *The Evolution of Finance Capitalism*, p. 299. New York: Longmans, Green and Co., 1938. (The provision of the Alabama state constitution "that no act of the legislature shall authorize the investment of any trust funds by executors, administrators, guardians or other trustees in the bonds or stocks of any private corporation" constitutes an exception in its severity of arbitrary restriction.)

they can afford to assume such responsibilities. One must bear in mind that the fee for the administration of a trusteeship is (in the East and South) not more than 5 per cent of its income. In view of the fact that the average income return cannot be estimated to yield more than 4 per cent, the annual administration of a \$100,000 living trust would bring about \$200 to the trustee.⁶ To operate a modern trust department, even on a relatively small scale, swallows the fees of a great many good-sized trusts, a factor responsible for the desire to share administrative costs with other banking departments.

PERSONAL TRUST BUSINESS

The term personal trust includes two different aspects of trust business, namely living trusts and trusts under will. The former designates a private agreement between the trust institution (trustee) and an individual (trustor) which takes effect during the lifetime of the trustor. The latter is obtained by the action of courts in cases necessitating the appointment of an executor or administrator, in which case the trust institution is accountable to the courts for the distribution or administration of the property involved.⁷

Living trusts. — A person who is considering the creation of a living trust has a choice of establishing it either on a revocable or on an irrevocable basis. Since in the recent past, there has been a decided tendency toward the irrevocable living trust, one which cannot be revoked in any way or only with the consent of some third person, we shall more or less confine our discussion of living trusts to the irrevocable type. A trust is revocable if the settlor alone has the right to demand and receive back property without first obtaining the consent of other persons or person.

Irrevocable trusts may be created (1) to reduce tax payments,

⁶ The present schedule of corporate trust compensation is still lower. The New York schedule, which is generally typical, provides in the case of an unsecured issue for an annual fee of \$675 for an issue of \$100,000,000. The American Bankers Association asks: Does anyone believe that it is good business for a financial institution to assume the responsibility of trustee for a \$100,000,000 issue, even under conditions existing before the Trust Indenture Act, for an annual fee of \$675?

⁷ If a person dies intestate, leaving property without a valid will, the court of probate jurisdiction appoints an administrator to settle the estate. When a person dies testate, leaving property and a valid will, the court usually appoints the person or institution named in the will as executor to settle the estate.

(2) to protect the beneficiary, or (3) to protect the settlor. Although the maker of such a trust may still have to pay a gift tax, such other taxes as estate or inheritance and income tax payments are not required. A businessman may decide to set aside irrevocably a certain amount for the members of his family. With the remainder of his estate, he shoulders the risks of a new business venture, putting part of his property beyond his reach. Many times trusts are made irrevocable for the protection of the settlor. It may be that a mother fears the dissipation of an estate by her son whose persistent pleas for money she cannot withstand. She places her property in an irrevocable trust, forcing him to deal with the trustee. Another settlor may fear the loss of business judgment in his old age. To protect himself from unwise actions with regard to his estate, he irrevocably trustees part or all of his estate independent of his business as quickly as he accumulates it.

Once an irrevocable trust has been created, it cannot be terminated unless there exists an element of fraud or mistake, on which grounds a court will consider termination. In most states, if the settlor fails expressly to reserve to himself the right of revocation, the trust is irrevocable. Loss of commission on the part of the trustee is not sufficient grounds to continue the trust against the will of both settlor and beneficiary. On the other hand, a trust considered irrevocable by the maker may turn out to be revocable should he fail to stipulate in the trust instrument the real purpose of the trust or should he reserve so many rights that the trustee becomes an agent. Courts have also terminated irrevocable trusts when the purpose for which a trust was established could no longer be legally or physically accomplished.

In view of the fact that today many irrevocable trusts are created to reduce tax payments, settlors anticipating future tax changes reserve to themselves many rights. Such reservations as giving the trustee the right to terminate the trust, to authorize the beneficiary to change the trustee, or to have the property revert to the settlor should he survive the designated beneficiary, do not place the trust in the category of revocable trusts. But where the dividing line between the revocable and irrevocable trust is, no trust man, tax specialist, or lawyer seems to know. Moreover, Congress might pass an act making, for tax purposes, an irrevocable trust revocable. Many a trust institution has been too apt to give its

customers assurance that an irrevocable trust reserving substantial rights to the settlor will affect a savings in tax payments.

Disadvantages of irrevocable trusts. — One cannot leave the discussion of irrevocable trusts without mentioning two major economic disadvantages pertaining to them. Property is placed in trust to conserve the principal, not to increase it; not to augment income derived therefrom, but to maintain it at a steady level. As a result of this, during a period of rising prices trust property is not handled as freely as property owned outright. Thus during a period of rising prices, trustee property is at a definite disadvantage. Second, a widespread irrevocable trusteeship of property leads to a concentration of wealth in the hands of trust institutions. Since many irrevocable trusts consist more or less of the stock of a single corporation, there exists at least a likelihood that trust institutions may become responsible for management. If the placing of tangible and particularly intangible property into irrevocable trusts should increase, we may eventually encounter a situation similar to that in England during the fifteenth century. At that time, landholders conveyed their lands to friends who as legal owners of those lands would still be bound by an understanding to use them in accordance with the wishes of the original owners. By this method feudal burdens and customary restrictions upon land ownership were successfully evaded. Finally Henry VIII forced upon Parliament in 1536 the great *Statute of Uses* in order to correct such evasion of the laws.

Other shortcomings of irrevocable trusts may be cited. While feeling too generous or too tax-economical, an individual may trustee so large a portion of his estate as to disfurnish himself. An irrevocable trust also means the loss of control over beneficiaries. Likewise, the changing needs of beneficiaries constitute a great drawback to the creation of irrevocable trusts.

Some trust institutions have acquired a definite reputation for lending themselves to tax-dodging through the instrumentality of irrevocable trusts. That trust institutions actively combat such a trend is proved by an address made at a trust conference in 1935, which stated in part:

We cannot afford to create an impression, no matter how erroneous it may be, that we are favorably disposed towards any plan or scheme or device that will deprive the government of its rightful shares of revenue from taxes or

estates and trusts. Let us actively combat any growth of the idea that trust departments operate mainly for the purpose of assisting the very rich to reduce their taxes. If in our quest for more business, we stray too far afield, we are apt to find that what we intended to be a boon has proved to be a boomerang.⁸

From a social point of view, concentration of wealth, whereby control of it is placed in the hands of corporate trustees, has its dangers. Under such conditions, a trustee may oppose price policies necessitated by prevailing national trends or may oppose the introduction of technological changes in one of its controlled corporations to safeguard the vested interests of another competing business. This is particularly true should a corporation apply for a loan to purchase new equipment to enable it to compete more effectively against another company whose shares constitute trustee property.

Trusts under wills. — A considerable part of personal trust business is testamentary, i.e., a court designates a corporate fiduciary to act as executor of a trust created by a will. In addition to business received through provisions of wills, the estate of a person dying intestate (without a will) may be administered by a corporate trustee appointed by the court of probate jurisdiction. Likewise, a court may designate a trust institution guardian of the estates belonging to minors⁹ or mentally incompetent persons. Corporate trustees have successfully solicited testamentary trust business, by rendering gratuitous services for the drawing and safekeeping of wills, which services are placed at the disposal of the testator if the company is appointed executor.

Life insurance trusts. — Some insurance companies still do not write policies providing for stated payments to be made to beneficiary after the death of the insured. Under a trust agreement, the policy is made payable to the trust institution which, upon the death of the insured, collects the amount due and administers it in accordance with the terms of the contract. Persons unable to carry insurance sufficient to support the beneficiaries from the income thereof, may thus profitably avail themselves of this service provided by corporate fiduciaries. A policyholder may trustee securities with his policies and order the trust institution

⁸ Quoted by Gilbert Th. Stephenson, in *Studies in Trust Business*, p. 168. New York: American Bankers Association, 1938.

⁹ In a number of states the court appoints two guardians for a minor. The one has charge of his property; the other, of his person. A trust institution seldom accepts the guardianship of a person.

to pay the premiums out of the income accruing from the deposited securities. Such an arrangement is termed a funded life insurance trust in contrast to an unfunded life insurance trust in which case the trustee has no duties during the lifetime of the policyholder.

Personal agencies. — Performing agencies with respect to property is the third main category of fiduciary services rendered by trust institutions; the other two constitute the distribution and administration of property. An agency agreement is created when an individual, known as the principal, authorizes another, known as the agent, to act for him in business transactions with third parties. According to the courts, "agency means delegated authority, and always implies some trust or confidence in the exercise of that authority."¹⁰ A trust and an agency differ in two main respects. (1) Under a trust agreement title to the property involved passes to the trustee. In an agency such title remains in the hands of the principal. (2) An agency terminates upon the death of the principal. A trust under will may continue under the law during the lifetime of the last survivor of the testator's children and until his grandchildren are twenty-one years of age.

There are four main types of personal agencies performed by trust institutions. They are: (1) custodianships, (2) escrow agencies, (3) managing agencies, and (4) attorneyships-in-fact.

Custodianships. — Custodianships involve many duties in addition to that of safekeeping. For example, income from securities is gathered, ownership certificates are executed to comply with tax requirements, and funds derived from matured or called securities are collected. In addition, a custodian must notify the principal of bonds called for payment, subscription rights, defaults and the formation of bond-holders protective committees, and is expected, in general, to relieve the principal of the routine details connected with the ownership of securities. All the enumerated duties apply, of course, equally to any other type of property under a custodianship.

Escrow agencies. — Under an escrow, a deed is placed by the grantor into the hands of a third person for the purpose of delivery to the grantee upon the fulfillment by him of certain specified conditions. No title passes until the stipulated conditions have been

¹⁰ *Fulton v. Walters*, 216 Pa. 56; 64 A. 860.

met. A transaction in escrow is always desirable when future contingencies, likely to arise between the agreement and its final consummation, may alter the situations under which the agreement has been made. For example, in a real estate transaction the purchaser wants to bind the deal but simultaneously wants to protect himself against a faulty title. In recent years, the use of the escrow has been extended from the original sole use for the delivery of deeds to the placing of mortgages and notes or any other article of value in escrow; delivery in these cases is made only upon the fulfillment of the stipulated conditions.

Managing agencies. — Whereas a custodian offers physical protection to property and relief from routine details connected with the ownership of property, a managing agent offers managerial service which includes the exercise of judgment. In this respect, a trust institution gives the securities or real property in the agency account the same attention which it gives to property held in a trust account. When an agency account is opened, a complete analysis of all property involved is made and recommendations are submitted to the principal as to which properties should be sold, retained, or converted. Upon receipt of instructions, the trust institution proceeds to comply with the orders. After such an initial analysis, the agent continues to submit periodic reviews including appropriate recommendations.

Under a managing agency, a trust institution is expected to notify the principal of pending maturities of bonds, notes, or mortgages; to prepare income statements for tax purposes; to make tax payments; to renew insurance or keep check on the renewal of insurance on property covered by mortgages held in the account; to compromise and arbitrate claims; to make leases and fix their duration; to exercise options and rights; to vote stock in person or by proxy; and to participate in business reorganizations.

Attorneyships-in-fact. — When a principal authorizes his agent to carry out a particular duty, not of a legal character, an attorneyship-in-fact is established. The attorney-in-fact possesses the power of attorney, that is, a written authorization to perform specified acts for the principal. Such written authorization is known as the letter of attorney. For example, a customer of a bank may wish to absent himself for an extended period of time. In order to safeguard his business interests, he executes a general power of attorney in

which he authorizes his bank "generally to act as my attorney-in-fact in relation to all matters in which I may be interested or concerned and on my behalf to execute all instruments and do all acts and things as fully and effectively in all respects as I myself could do them if personally present."

Summary. — In summary, it may be stated that personal trust business usually appears under the following headings: (1) the management of living trusts on a revocable or irrevocable basis under the exercise of mandatory or discretionary powers, (2) trusts under will in the form of administration or execution of wills and guardianships, (3) trusts agreements for the distribution of the proceeds of life insurance, and (4) the performance of personal agencies.

CORPORATE TRUST BUSINESS

Despite the fact that the growing importance of the corporate organization in business has necessitated the rendering of special trust services to corporations, this branch of trust business has received comparatively little attention by trust men.¹¹ The reason no doubt is that only a relatively small number of trust institutions are engaged in corporate trust business on an appreciable scale. Only recently, as a result of certain investigations made by the Securities and Exchange Commission, attention has been called to this type of trust business. At present, the main demand for corporate fiduciary services is in connection with trusteeships under bonds and notes.

Trustee under corporate mortgages. — Should a corporation decide to float a bond issue secured by a mortgage upon its property, it would be impossible to attach to each individual small bond a mortgage stating the conditions under which property may be turned over to the corporation's creditor in case of insolvency. To assure complete protection to the bondholders, a joint mortgage against the corporation's property is drawn up and placed in the care of a trust institution. Before accepting such a corporate mortgage trust, the accuracy of its contents and its legality must be carefully scrutinized. The care of the trustee extends not only to the

¹¹ While corporations served as early as 1839 as trustees under a bond issue, the practice of appointing individuals as trustees under corporate bond issues did not completely cease until the end of the nineteenth century.

mortgage but also to the engraving of the bonds; precautions are taken to prevent the loss or theft of plates.

Even in cases of debenture bonds, the services of a trustee are essential to enforce the agreement between the corporation and its creditors and to specify the privileges and duties of both contracting parties. When collateral trust bonds are issued, the collateral is held in trust by the corporate fiduciary for the protection of the bondholders. If provisions are made in the indenture for a sinking fund or amortizations by series of the issue, the trust institution supervises the execution of such contractual obligations. When a railroad pledges rolling stock as security for its bonds, title to it, similar to a mortgage, is vested in a corporate trustee from whom the company in turn leases the rolling stock. Rental received is applied to meet the interest and amortization charges of the issue.

Transfer agent for corporate securities. — When stock certificates change hands, it becomes necessary to record such transfer on the books in order to possess at all times an accurate list of the owners of a corporation. In view of the considerable daily trading in some stocks, the posting in stock-transfer books and stock ledgers is considerable work. It should be remembered that stock certificates are nonnegotiable and in case of transfer, the old certificate must be surrendered and a new one issued to the transferee. Trust institutions also act as transfer agents for registered bonds which may be registered as to both principal and interest or as to principal only. In addition to serving as transfer agent for stocks and registered bonds, trust institutions may act as transfer agent for receivers' certificates, for certificates of deposit, and for warrants and stock subscription rights.

Registrar of securities. — To prevent overissuance of a stock, registration of stock certificates by an independent registrar is required. Since it is the function of the registrar to act as a check upon the issuing corporation, a different trust institution from that acting as transfer agent must be selected. The registrar is to check both the old and the new certificates to see that the volume of new certificates issued equals the volume of old certificates cancelled. In case of registered bonds, trust institutions are also appointed to act as registrars; as a rule, however, bonds unlike stock certificates are negotiable instruments (title passes upon delivery) and no

assignments are necessary to transfer ownership. It is, of course, possible for a corporation to have two or more transfer agents and two or more registrars. A corporation must have a transfer agent and a registrar where the exchange is located with which its stock is listed.

Depository under reorganization. — Should a corporation default on the interest payments of its bond issue, a creditors' committee is usually formed to submit plans for reorganization. Pending reorganization, the bonds are deposited with a corporate trustee and in return the owners receive transferable certificates of deposits. Similar steps are taken when a merger occurs between two or more corporations.

In bankruptcy proceedings, property is frequently turned over to a corporate fiduciary by assignment, whereupon the assignee acts as a collector of funds owed to the insolvent business and as examiner of the claims of alleged creditors. Sometimes a court may appoint a trust institution as receiver for a business to enable it better to weather storms of temporary financial embarrassment. A corporation may, of course, also utilize the services of a trust institution for transactions under an escrow agreement.

Fiscal services. — Fiscal services rendered by a corporate trustee to a corporation are in the nature of a special or a general arrangement concerning finances. The trust institution may act as treasurer, receiving and disbursing all funds, or it may merely make specified periodic payments such as for interest due or dividends. Again, a corporation may wish to protect certain of its accounts, such as general salary, profit and loss, and controlling accounts from preying eyes, in which case a trust institution may take charge of such accounts.

Institutional trusteeships. — Many endowed institutions are turning today to trust institutions to handle their endowments. Whenever endowed property is owned outright by a school, church, hospital, or similar institution, the latter may trustee such property with a corporate fiduciary as any individual may trustee such property. Such an institutional trust is, however, not adaptable to the requirements of all endowed institutions. Frequently the institution itself holds its endowment in trust. Having accepted a gift, say, for the purpose of establishing and endowing a chair of economics, the university cannot divest itself of the trusteeship by

passing it on to a trust institution. But it may appoint a trust institution its managing agent.

In almost one hundred American cities, *community trusts* or foundations have been established under the provisions of which a trust is created for a city, county, or state. Individuals make gifts to a common trust. They may designate the purposes for which their gifts are to be used or they may make undesignated contributions. Designations will be respected only as long as it is practicable to do so. The community trust has solved the problems raised in the past by gifts too small to be administered as individual trusts or by inelastic contributions circumscribed by many restrictions which often defeated the real purpose of the donor.

In recent years, *employees' trusts* have been established by industrial corporations to stabilize employment, to reward efficiency, to encourage thrift, and to provide for profit sharing and pensions. Employees' trusts are still at an early stage of development, but are increasingly created to provide more adequately for all classes of employees.

GOVERNMENTAL SUPERVISION OF TRUST BUSINESS

Government supervision of trust business involves the use of the following methods: (1) issuance of certain rules concerning the administration of trusts, (2) periodic examination of individuals and corporations engaged in trust business to assure compliance with existing regulations, and (3) enforcement of rules. It is quite obvious that these regulatory procedures supplement each other. Yet until the Banking Act of 1933, supervisory agents possessed practically no powers to stop practices which, when continued, led to final disaster. Such punitive powers as existed could be exercised only when a state of insolvency had been reached or when a clear-cut violation of regulations had occurred.

The trust business of a state-chartered nonmember bank is supervised by the banking authorities of the state and, if deposits are insured, by the Federal Deposit Insurance Corporation. Trust funds held by an insured bank in a fiduciary capacity are insured up to \$5,000 for each trust estate. In determining amounts of deposits eligible for insurance, the amount due a beneficiary is combined if more than one account exists. The trust business of

a state-chartered member bank is, since 1934, under the supervision of the state banking authorities and the Board of Governors of the Federal Reserve System. National banks performing fiduciary services are supervised by the Comptroller of the Currency under regulations issued by the Board of Governors of the Federal Reserve System. As a result of this situation, conflicts have arisen between federal and state agencies. Conflicts have also arisen between supervisory agencies and state courts having jurisdiction over trust business.

Development of supervision. — Prior to 1933, examinations of trust departments were rather cursory, since they consisted primarily of:

... a reconciliation of the cash-ledger accounts with the bank balance and a check of the securities shown by the records with those in the vault. No attention was given to the manner in which the duties of the fiduciary were performed. The examination of the trust department was not comparable to that given the banking department, largely perhaps because supervisory authority, like the executive management of the banks of which trust departments were a part, was not informed as to performance of fiduciary duties and the liabilities, contingent and actual, which might be incurred in the exercise of such functions.¹²

The bank holiday of March 1933, during which many trust institutions were liquidated or reorganized, focused public attention upon their operations and liabilities. The same year, the American Bankers Association introduced and accepted a set of self-imposed rules for the conduct of trust business. Shortly thereafter, the Board of Governors of the Federal Reserve System increased the range of examination of the trust departments in state member banks. To assure efficient examinations, at least one special examiner for the work of trust examination was appointed at each Federal Reserve bank. Uniform reports of examination are now used by all federal supervisory agencies, the apparent success of which persuaded most state banking authorities to accept similar forms for their examinations.

Duties and liabilities of trustees. — The main duties of a trustee are contained in the laws of trusteeship. Generally speaking, they may be enumerated as follows: (1) to care for the trust property, (2) to make it productive, (3) to be faithful both to the

¹² *Trust Bulletin*, July 1936, p. 6.

creator of the trust as well as to the beneficiaries under it, and (4) to render accurate accounting of the administration of the trust property. The special duties of a trustee are expressed in the trust instrument. The directions stipulated therein must be carried out by the trustee unless they are against the law or against public policy.

Most state laws provide that trustees must discharge their duties with the degree of care, skill, and prudence of an ordinary man administering his own property. The courts in determining liability, however, have gone much farther than adhering to the so-called prudent-man rule. When trustees advertise their services as experts, the courts have insisted that, to avoid liability, trust institutions must perform their contractual duties as professional experts.

A corporate fiduciary is usually liable for all acts of fraud or cases of negligence, such as failure to protect real property under its administration by adequate insurance coverage or promptly to dispose of securities which, due to one reason or another, have been removed from the legal list. Damages may be obtained by a beneficiary should funds be left idle because of negligence. Trustees can, furthermore, be held responsible for any losses occurring as a result of unauthorized actions.

At times honest breaches of trust, i.e., violations by the trustee of duties owed to the beneficiary, might become necessary. Not infrequently does a trust agreement fail to give the trustee power to perform acts indispensable to the good of the beneficiary. Once a trust has been accepted, it must be carried on until terminated by the court or beneficiary. Inflexibility and unworkability of a trust do not persuade the court to relieve the trustee from such a burden. Such a condition might lead the trustee to an honest indiscretion, to commit an honest breach in the interest of the beneficiary. In case of success, the trustee stands to benefit by this vigilance in maintaining trust funds on an earning basis; in case of failure, the beneficiary may bring suit for breach of trust.

RECENT TRENDS IN TRUST BUSINESS

As previously pointed out, the experiences during and immediately after the wave of bank suspensions from 1931 to 1933 caused

federal and state supervision of trust business to become much stricter. With this, there came a pronounced tendency to hold the directors of trust institutions to greater accountability. Under Regulation F, Trust Powers of National Banks, the Board of Governors in June of 1936 introduced a list containing fifty-four items for which national bank directors engaging in trust business should be held responsible.

The common trust fund. — Effective December 31, 1937, Regulation F was amended to permit national banks (1) to invest the funds of various individual trusts in a common trust fund, provided that the amount so invested from any one trust does not exceed \$25,000, or 10 per cent of the value of the assets of such common trust fund, whichever amount may be less; and (2) to make collective investment of funds of individual trusts in a common trust fund, provided the amount invested from any one such trust account does not exceed \$1,200. Prior to this amendment, national banks could make collective investment of funds of individual trusts only if such funds were too small to warrant separate investment.

According to the definition adopted by the American Bankers Association, a common trust fund is a "fund established by a corporate trust institution, in which is combined for the purpose of facilitating investment, money belonging to various trust accounts in its care, the participating contributory interests of said accounts being appropriately evidenced." Some institutions prefer to call this device an associated trust since it really represents an association of trusts.

As a result of using the common trust fund, interest of small institutions in trust business has been stimulated. Not only may a small estate now enjoy diversification of investments and hence reduction of risk and better stabilization of income formerly confined solely to large estates, but the cost of investment servicing is considerably less than when small accounts are invested independently. It is often not realized how small the average trust account is. A report on June 30, 1939, of the Comptroller of the Currency shows that the average volume of trust assets in each individual trust in national banks capitalized at \$25,000 was \$9,684; in those capitalized between \$25,000 and \$50,000, \$10,929; between \$50,000 and \$100,000, \$10,422; and between \$100,000 and \$200,000, \$13,155.

In national banks capitalized between \$200,000 and \$500,000, the average volume of trust assets in each individual trust was \$22,343. Banks with a capital of \$500,000 or over showed an average volume of \$97,123.

The earning position of the corporate fiduciary. — Impartial surveys made of trust activities point out that most trust departments of banks lose money and that they would improve their position if they would cease performing fiduciary services. The reasons usually given for insufficient earnings are that the particular community in question affords but a small volume of trust business and that more than one institution has offered fiduciary services in a community. Under such conditions, it seems advisable, providing adequate federal and state legislation can be obtained, for the competing banks jointly to establish a trust company to offer fiduciary services at a greatly reduced cost of operation. Smaller banks in the outlying districts might be induced to act as feeders if they were permitted to purchase an equity in the new trust company. Profits would then be distributed in accordance with the amount of capital invested by the participants.

In a recent study of costs made in the State of New York, in which one hundred and twenty trust departments of banks and trust companies submitted cost statements, it was revealed that present trust fees were, without doubt, inadequate. The study showed an average loss to trust departments of 25 per cent from all commissions received by banks administering trusts. The authors of the study came to this conclusion:

It would be reasonable to assume that even though the fees were 25% higher, it would be still impossible for the trustee to show a profit. After allowing for earnings on uninvested and undistributed cash balances, the averages disclose that the losses still are 14% so that when both commissions and earnings on deposits are taken into consideration it would be necessary to increase commissions by 16% before the department would be receiving back the bare cost of furnishing trustee service.

It is axiomatic that the cost of furnishing adequate trustee service cannot be reduced without impairing the quality of the work. The economic system has become much more complicated during the last decade, necessitating the employment of specialists to furnish the information upon which investment policies are predicated. While higher standards of trust service are generally observed today than ever before, it must be recognized that trust administration has become constantly more difficult due to the intricacy of many of the

new tax returns and various other administrative requirements. Together, all of these things prevent the trustee from reducing the costs for this service.¹³

Until recently, the main form of trust compensation has been in the form of a definite percentage of the income derived from trustee property; this has been firmly established by statute, custom or contract. Thus a gain or loss on the principal means nothing except in so far as it affects the amount of income derived therefrom. The principal is now being increasingly resorted to as a source of income. It may even be that the settlor or beneficiary will be charged with the costs of fiduciary services should present trends continue.

Changes in types of services rendered. — The present unsatisfactory earning position and the experience gained during the crucial years of the depression are bringing about considerable changes in the services offered by corporate fiduciaries. For example, more attention is being paid by trust institutions to corporate trusts and to unfunded life insurance trusts.

Another interesting aspect of the development of trust business has been an increasing cooperation with the legal profession. In the past, trust institutions have hesitated to call attention to defects in the drafting of trust instruments, which made the successful execution of trust agreements often virtually impossible without breach and its concomitant risk. More distinction is today being made between workability and legality of trust instruments.

Two other recent developments should be mentioned: (1) organized trust research as carried on by the Graduate School of Banking of the American Bankers Association to find new trust services and more efficient methods of rendering present services, and (2) an attempt to clarify the functions of investment counsel of trust institutions. The service of investment counsel has been transferred in some trust institutions from the commercial banking to the trust department by opening managing-agency or active custody accounts which in some institutions have outgrown the volume of living trust business.

Many an agency account is in reality a trust account. For example, a person having inherited property places the estate's management in the care of a trust institution. The income there-

¹³ *Trust Bulletin*, July 1938, p. 6.

from is his livelihood and he is, therefore, primarily concerned with the dependability and regularity of the income. The owner of the estate comes to the trust institution for investment advice and the institution knows he will rely upon such advice. Thus, investment recommendations will be accepted by the customer as investment decisions, thereby making the financial institution in actuality a trustee endowed with plenary fiduciary duties and responsibilities even though technically the trust institution is merely termed an agent or custodian or attorney-in-fact. This situation may lead eventually to a complete change of policy on the part of financial institutions offering trust services. These institutions may decide that investment advice will be given only to those who have established living trust accounts.

Proposed limitations of fiduciary business. — As a result of experiences during the years of the recent depression, the question of desirability or undesirability of the association between trust and commercial banking business has been reconsidered. The Securities and Exchange Commission has made an exhaustive study of one phase of this problem, namely, trustees under indentures. While it has been charged that the report was a brief against all corporate trustees rather than an objective presentation of facts, the study nevertheless will lead a neutral reader to the conclusion that the duties of corporate trustees under indentures necessitate considerable changes for the protection of the investing public. Terms of bond indentures are so modified that the trustee is delegated few duties which are not of a routine nature.

The Securities and Exchange Commission concludes that

... either corporate trusteeships must be divorced from commercial banks and made the exclusive function of trust institutions specializing in the business of acting as trustee; or a commercial bank acting as trustee for securities of a corporation should not be permitted to hold a management, ownership or creditor position in that company or have any other interest inconsistent with its fiduciary responsibilities.¹⁴

Following the submission of this report to Congress, the so-called Barkley Bill (S. 2344) was introduced in 1937 in order to remedy some of the evils stressed by the Securities and Exchange Commis-

¹⁴ *Report on the Study and Investigation of the Work, Activities, Personnel and Functions of Protective and Reorganization Committees, Part VI, Trustees under Indentures*, p. 107. Washington, D. C.: Securities and Exchange Commission, 1936.

sion. A lack of unanimity on the part of the members of the congressional committees as well as on the part of witnesses, prevented the passage of the bill. The hearings did, however, emphasize the need for further study before additional liabilities are imposed in connection with trust indentures. Moreover, the fear of liability might cause trustees to force concerns, which could otherwise be saved, into bankruptcy or reorganization.¹⁵ For example, it would certainly be to the disadvantage of bondholders to prohibit a bank to extend short-term loans to a corporation for which it is acting as trustee under certain types of indentures.

In view of the many reasons, previously presented in this chapter, for the association of commercial banks and trust businesses, it seems rather doubtful that other states will follow the lead of Michigan, Nebraska, and Wisconsin in their imposition of statutes to limit such association. This may be, however, not due to the fact that state banking departments do not see the need for such legislation but due to the states' anticipation of federal regulation in this matter.

SUGGESTIONS FOR FURTHER READING

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¹⁵ The Barkley Bill was reintroduced in the 1938-1939 Congress and was passed, in May 1939, in modified form as the Trust Indenture Act of 1939. Under it the responsibilities of the trustee under trust indentures have been greatly increased.

CHAPTER XVII

ACCEPTANCE AND INVESTMENT OF SAVINGS BY FINANCIAL INSTITUTIONS

The accumulation of savings. — The financial structure of the United States contains a number of institutions whose primary function and interest are to aid the public in making investments. They assemble the savings of individuals and, as a rule, give them in return evidences of claim in the form of pass books, certificates, or policies for their shares in such assets. The accumulated funds are placed at the disposal of certain industries or governmental bodies. Figure 24, which was introduced in material presented at a hearing before the Temporary National Economic Committee in 1940, presents the various processes that individuals employ in accumulating their savings from personal incomes:

1. The Social Security, life insurance, and pension funds of the United States Government have accumulated approximately \$7,000,000,000.

2. Amounts in postal savings and savings represented by the purchases of so-called baby bonds are approximately \$3,000,000,000.

3. More than \$28,000,000,000 has been accumulated to the credit of individual policyholders as a result of payments of premiums on life insurance policies to legal-reserve life insurance companies and fraternal life insurance associations. (The bar in Figure 24 representing this accumulation is divided to reveal the different types of investment.)

4. The accumulation of savings deposits in mutual savings banks stands today at approximately \$11,000,000,000.

5. Savings, thrift, or special-interest departments of commercial banks account, at the present time, for between \$14,000,000,000 and \$15,000,000,000. (The adjoining bar represents the total demand deposits of commercial banks.)

6. The next reservoir of savings, direct bond and mortgage investments of individuals, is an amount impossible to ascertain under present conditions. There are no figures to indicate investments in equities on the part of the public.

7. Savings and loan associations, sometimes known as building and loan associations, possess savings amounting to \$5,000,000,000.

8. With regard to the amount of money entrusted to private and corporate trustees, little is known. The Securities and Exchange Commission estimates that \$50,000,000,000 is approximately the total amount of wealth controlled by individual and corporate trustees.

9. Such investment trusts and insurance companies as fire, marine, and casualty insurance companies represent about \$8,000,000,000 of savings.

10. With regard to individuals' direct investment in stocks or in the direct ownership of real property, information is totally lacking.

If the entire accumulation of savings is to be stated, however, it is necessary to refer also to business savings, an item to be distinguished from that of surplus and undivided profits on corporate balance sheets. Business savings is the amount of values left in the possession of a business enterprise after all expenses incurred in the process of production, including dividends, have been paid. Surplus and undivided profits are not always composed of savings retained as business savings. It is clear that these savings are, in part, represented in our chart.

SAVINGS DEPOSITS

In view of our discussion of trustees in the preceding chapter, our main problem, at this point, is to describe the accumulation and investment processes of institutions primarily devoted to the acceptance and investment of savings. The institutions to which we refer are: (1) mutual savings banks, (2) savings departments of commercial banks, (3) postal savings departments, (4) stock savings banks, and (5) cooperative savings institutions. Since investment trusts are of a cooperative nature, they too are included.

As has been previously stated in our presentation of the banking process, depositors of commercial banks become borrowers at times. In return for maintaining a credit balance with the bank, the customer receives a line of credit to be drawn upon in time of need. With respect to savings deposits, this relationship ceases to exist. First, savings departments and savings institutions do not create deposits as do commercial banks, but merely attract deposits.

These small savings of thousands of individuals are pooled for possible long-term borrowing by private or government enterprises. Second, lenders and borrowers usually belong to fundamentally different strata of society.

Motives of depositors. — Interest from savings and the protection given the customer constitute the most powerful reasons why individuals deposit their temporary surplus funds with a bank. Not only are the depositor's funds generally safer in a bank than in his personal possession but the amounts in his possession are usually insufficient to be invested by himself. A bank receiving these financial dribblets is in a position to invest the total in enterprises of a highly diversified nature so that the risk factor is greatly diminished. Even if an individual should possess rather large savings, he could not as a rule obtain this diversification. The fact that a savings account, in contrast to a bond, does not decline in value during cyclical downswings is, of course, another inducement. There is a tendency to overemphasize the role that yield plays in the accumulation of savings deposits. Among the lower-income groups, savings are often made to provide for future hospitalization, education of children, or protection against recurring unemployment. Many of these people would, no doubt, save substantially similar or even higher amounts should a much lower rate of interest prevail or should no interest be given at all.

If one were to arrange the main motives of depositors according to a priority scale, overwhelming evidence would seem to point first to safety, then to availability, and then to yield. When an analysis is made of the reasons for large time deposits today, this ranking seems to hold true. The decline of security values after 1929 convinced many individuals of their own inability to supervise the direct investment of their savings. Present unstable economic and political conditions increase the risk to such proportions that returns on investments are in no relation to risk assumption, so that even a small yield on savings accounts becomes attractive. The difficulty of finding proper investments for one's savings, in view of the reduced corporate demand for savings and the private placing of issues with insurance companies, has likewise been responsible for the increase in time deposits.

Savings deposits as investments. — From the preceding paragraphs, it is evident that an interest-yielding savings account is in

reality a form of investment. This statement is borne out by the fact that under the law banks are entitled to require a certain notice of withdrawal. Unfortunately, this requirement is seldom enforced with the result that savings depositors grow accustomed to withdrawals upon demand. In periods of financial stringency, banks proceed to enforce this otherwise forgotten requirement, creating an impression of insolvency in the mind of the customer and perchance in the community at large. If time deposits are subject to check, they cease being investments and must be classified as money, that is, demand deposits with a low rate of turnover.

Present trends.—Table 26 presents a summary of savings deposits made during the period 1928–1939.² In addition to the institutions enumerated, there are, as Figure 24 indicates, still others which help to direct the flow of savings. Banks today are becoming increasingly concerned with the savings problem, which has a dual aspect.¹ On the one hand, there is a trend toward reducing interest rates on deposits in order to bring them into line with earnings on bank assets. On the other hand, there is the problem of merchandising thrift in such a manner as to continue to attract savings funds and to maintain the volume of savings. Some bankers fear that banks are following a trend that might gradually keep them from handling individuals' savings. Among plans proposed to attract savings is the acceptance of fixed-term deposits which would justify longer-term employment of savings deposits and a lower degree of liquidity, and presumably permit a higher return to depositors.

One interesting development has been the wide promotion of systematic savings plans of various types. The idea of buying \$1,000 on the easy payment plan has received a ready response from the public as many individuals have acquired the installment-plan habit and have found this form of savings in accordance with their other methods of payments. This new emphasis has brought with it a pronounced change in bank advertising pertaining to

¹ A considerable part of savings deposits in commercial banks should not be considered true savings because they are amassed for non-current spending. One cannot speak of savings unless the time interval is so chosen that the deposits are accumulated in one interval and spent in another. From this point of view, the use of the time certificate of deposit instead of the customary savings deposit account would seem to be more advisable.

savings. In the place of "scare copy" and moral preachments, the advantages of a consistent savings plan are now stressed.

TABLE 26. SAVINGS DEPOSITS, 1928-1939
(Including time certificates and postal savings: 000 omitted)

Year	Mutual savings	State banks	Trust companies	Private banks	National banks	Total savings deposits
1928	\$ 8,668,090	\$7,597,977	\$4,080,324	\$16,797	\$8,049,773	\$28,412,961
1929	8,908,557	7,369,512	4,022,735	33,440	7,888,567	28,217,811
1930	9,205,580	6,803,672	4,349,057	23,546	8,096,776	28,478,631
1931	10,034,022	5,985,274	4,128,200	27,413	8,044,709	28,219,618
1932	10,039,958	4,259,494	3,005,439	17,997	6,958,458	24,281,346
1933	9,760,221	3,045,218	2,397,644	10,371	5,912,080	21,125,534
1934	9,803,165	2,978,475	2,439,367	33,678	6,497,825	21,752,510
1935	9,871,523	3,296,440	2,529,555	47,329	6,869,177	22,614,024
1936	10,010,166	3,591,646	2,626,110	47,461	7,188,202	23,463,585
1937	10,163,740	3,810,223	2,939,399	44,329	7,534,266	24,491,957
1938	10,151,410	3,969,195	2,867,453	38,855	7,598,601	24,625,514
1939 (June 30)	10,384,874	4,158,700	2,808,305	36,190	7,692,878	25,080,947

Reserves against savings deposits. — Savings deposits possess by their very nature a regularity of deposit and low velocity so that authorities recognize the need for only small reserves in this type of banking. It will be remembered that these facts were entirely overlooked by the founders of our national banking system when they required the same amount of legal reserves to be kept against time and demand deposits. At present, all classes of member banks are required to keep a legal reserve of 5 per cent against time deposits with their respective Federal Reserve banks, an amount which could be raised to 6 per cent or lowered to 3 per cent at the discretion of the Board of Governors of the Federal Reserve System. The question as to whether such a reserve is adequate has arisen at times. Since, as we have seen, the size of reserves does not *per se* assure protection to depositors, the question of size of reserves is rather misleading; moreover, the problem could be settled by eliminating, for purposes of computing legal reserve, every distinction between time and demand deposits, basing requirements primarily or solely upon the degree of turnover of deposits. As time deposits display an exceedingly slow turnover, their reserves *ipso facto* would be low.

Interest on savings. — Unregulated interest payments by institutions accepting savings deposits are dangerous in that excessive competition for deposits may drive the interest rate paid to such heights that the institution offering it may be forced to invest funds thus attracted in high-yielding and hence high risk-bearing investments. Interest paid by a commercial bank does not necessarily need to be restricted to earnings from savings, as interest may and can be paid out of the total earnings from all assets. In contrast to the Federal Reserve System, some states, for example California, require segregation of assets and business of the savings departments of commercial banks. Under such conditions, interest rates on savings deposits would, of course, be restricted to their actual net earning.

Segregation of assets and savings functions in commercial banks involves more than the usual distinction between time and demand deposits. A careful allocation of all expenses incurred will have to be made and an investment policy which recognizes the diverse needs of the respective departments will have to be accepted. As a means of postponing liquidation of assets in time of financial stress, savings contracts must be re-written imposing more definite restrictions on withdrawals.

Maximum interest rates on time deposits that may be paid by the members of the Federal Reserve System are established by the Board of Governors. They are, at present, $2\frac{1}{2}$ per cent on deposits with a maturity of six months or more and 1 per cent if payable in less than ninety days. Maximum rates that may be paid by insured nonmember banks are established by the Federal Deposit Insurance Corporation and are the same as those in effect for member banks. In some states, state authorities have established considerably lower minimum rates. In view of the lack of suitable outlets for savings funds, banks have been forced to pay substantially lower rates than those set by the authorities.

Under a recent regulation, which says:

The term "interest" includes any direct or indirect payment by the bank of the purchase price of premiums given to depositors or prospective depositors in connection with obtaining deposits . . . ,

competition for savings deposits has been placed on a sounder basis than formerly. Gone are the days when institutions promoted thrift

with premiums, prizes, and valuable gifts, actions which often drove them to invest funds thus obtained into higher-yielding investments and to sacrifice safety.

A president of an important state bankers' association recently expressed his belief in the advisability of adopting a split rate of interest: $\frac{1}{2}$ of 1 per cent for deposits to be withdrawn on demand, 1 per cent for deposits to be withdrawn only after a minimum of six months, and 2 per cent for funds left for one year, under a six months' notice of withdrawal. A split rate will not by itself reduce the interest cost of a bank. This reduction will depend upon the deposit-liability structure of individual banks.

The importance of the effect of the deposit-liability structure upon the interest cost of a bank employing a split rate is illustrated by an analysis made by the Savings Bank Trust Company in New York City. It found that in one bank in which a large proportion of the deposit liability was composed of relatively few large accounts and which received little new money, the cost of a split rate of 3 per cent on balances left on deposit over five years or more and 1 per cent on the remaining time deposits was about 14 per cent more than the cost of a flat rate of 2 per cent would have been. In another case, a rapidly growing bank with much new money coming in estimated that the cost of a split rate of 3 per cent and 1 per cent would reduce the cost to it by 18 per cent.

Investing savings. — From the point of view of the savings bank, the majority of its accounts are those of small savers who usually add a small amount to their deposits as they receive income payments. The deposits are not only extraordinarily *regular*, but also stable² since, even after sizable amounts have been accumulated, individuals seldom withdraw funds for direct investment purposes. Demand deposits, from 1919-1928, turned over between 40 to 60 times a year in contrast to time deposits which, on the whole, have never turned over as often as once a year. In view of this fact, bankers can afford to invest these funds in long-term securities, or to extend long-term loans. Originally, the chief types of investments of savings institutions consisted of bonds and mortgages; however, with the increasing competition of other agencies, other

² In the State of New York the volume of time deposits increased from \$4,463,046,000 in 1929 to \$5,139,593,000 in 1934, indicating a surprising resistance to the depression of 1933.

sources of income had to be found. For example, building and loan associations are becoming more aggressive and the federal government has been tapping the savings field through an increasingly widespread sale of savings bonds on an instalment or savings plan through the Treasury. A perusal of Figure 24, at this point, will show the process employed by various institutions in investing savings.

According to the Seventy-sixth Annual Report of the Comptroller of the Currency on June 30, 1938, the investments of the mutual savings banks were distributed as follows: (1) 50 per cent in real estate mortgages, (2) 25 per cent in United States government direct and fully guaranteed securities, (3) 15 per cent in railroad bonds, (4) 7 per cent in obligations of states, counties, and municipalities, and (5) 3 per cent in other miscellaneous investments. As statistics pertaining to the separate investments of savings departments of commercial banks are not available, the above items may be taken as illustrations of the importance of mortgages and bonds to savings institutions in general.

Some savings banks, particularly mutual savings banks, feel that they should furnish funds for amortized personal loans since they have been the traditional bankers for people of small and moderate means. Among other services that have been suggested for savings institutions are the sale of money orders, pay-as-you-go checking accounts, and the sale of savings-bank life insurance, a service which will be discussed in more detail in the following paragraphs. Savings institutions pressed both by a scarcity of proper investments at a reasonable yield and by increasing competition from new private and government institutions, seem to be moving in the direction of increased competition with commercial banks.

SAVINGS-BANK INVESTMENTS

Owing to the stability of his deposits, a savings banker's first attention is to the safety of his investment; his second consideration, that of yield. The problem of liquidity and marketability occupies little of his time. He can afford to purchase the bonds of small public or private corporations which are usually only sold in the over-the-counter market as long as they display adequate protection for continued interest payment and amortization of the principal.

The practice of private and public corporations of refunding their obligations at considerably lower interest rates has greatly augmented the problems facing savings institutions. Many of these securities have been placed privately to avoid the expense of registration required by Securities and Exchange Commission regulations, and the banks have thus been left with the problem of finding suitable investment opportunities for funds reacquired against their wishes.

The bond portfolio. — To assure a successful investment policy, the following self-imposed or legal requirements are observed by savings banks:

1. Only high-quality investments are considered.
2. Investments are distributed among diverse industries in various geographical areas.
3. A periodic check and revision of the bond portfolio is made to insure higher and better safety and yield.

In view of recent trends in the bond market, it has become increasingly evident that the many small savings banks need better facilities for obtaining adequate knowledge concerning the status of their investments. Savings bankers have developed certain rule-of-thumb ratios, for instance, in regard to railroads, such as funded debt per mile, operating ratio, net earnings available for fixed charges, etc., which no longer assure ample cushions against future trouble. The lack of proper recognition of obsolescence in railroad accounting and infrequent reserves for depreciation of equipment are factors that have brought much grief and expense to savings institutions.

Although, as has been pointed out before, a savings banker's prime consideration usually is the safety of his investments, bankers have rather frequently disregarded this safety factor. At a recent convention of savings institutions the following statement concerning this point was made:

The cold truth is that most of us have purchased bonds upon a rather superficial investigation, that so long as coupons are paid we give them little attention, that we are rarely willing to take losses but that after the blow falls and the question becomes one of salvage, we indulge in a hectic, feverish, expensive, and largely ineffective activity.

No doubt, since many institutions usually buy on the strength of a prospectus, the Securities and Exchange Commission has

rendered a real service to small and medium-sized savings institutions by requiring more detailed information for the prospective investor. Yet there are many bankers who have vociferously objected to the new form of prospectus, because in their eyes it contains too much information and they prefer to have it boiled down.

It is regrettable that so far no complete study has been made of the losses of savings institutions in their bond accounts through defaults, receiverships, and reorganization. Some consideration has been given in recent years to the establishment of regional research cooperation of savings institutions to obtain more investment data and to enable small institutions to make switches in their bond portfolio when changing conditions advise such action from the point of view of either safety or yield.

Real estate loans. — The large majority of direct loans made by savings banks still consist of loans with real estate as security. While loans upon rural properties can be made directly and immediately to the farmer, the financing of urban properties is a secondary step on the part of savings institutions. Builders usually obtain construction funds in the form of secured personal short-term loans from commercial banks due on the date that the mortgage is expected to be sold.

If properly made, real estate loans are good investments from the point of view of both yield and safety. Since real property values tend to fluctuate with business trends, and since such loans are frequently tied up with local conditions reducing the possibility of obtaining a lower risk as result of diversification, the federal government has for some time realized the need for agencies to aid in the liquefaction of such bank assets. This action is all the more essential when proper segregation of the assets of commercial and savings departments in departmentalized banking is lacking. Since 1929, the Federal Intermediate Credit banks, which are discussed in Chapter XVIII, have rediscounted farm paper; the Home Loan banks, urban real estate mortgages.

In the past, losses of and failures among savings institutions could have been avoided if loans on real estate had not been greatly overextended and if proper provision for amortization including periodic inspection of mortgaged properties had been made. Even today the majority of the states have not enacted a general plan

for the amortization of mortgage loans, a plan that could easily be put into effect by offering a slightly lower rate of interest in favor of those borrowers willing to adopt an amortization program. Placing real estate mortgage loans on a modernized and sounder basis will, however, mean the expansion of lending activities by commercial banks in this field.

The system of requiring weekly payments has enabled property owners to finance every conceivable type of luxury, in many cases at the expense of the mortgage holders, while interest and tax payments have often been postponed. To eliminate such practices, accounts similar to Christmas or Tax Clubs could be established, which would include not only the amount required for taxes, but also the amount needed for interest and amortization payments. Amounts regularly deposited would be credited periodically upon the mortgage note. The financing of houses upon the instalment plan through the federal housing authorities has emphasized the importance of proper amortization payments to the savings banker.

Another plan to increase the safety of mortgage loans is that of insuring the lives of borrowers on real estate mortgages in order to cover the unpaid part of their loans in event of death. Such plans are also in use in commercial banks wherein for a small addition to the regular interest rate the bank through a borrowers' group-insurance plan insures the lives of borrowers. The insurance companies retire the unpaid balance on the loan if the borrower dies before maturity. Under a decreasing-term insurance plan under which the annual premium and the amount of insurance are reduced as payments on the mortgage are made, the charge is surprisingly small. The Commissioner of Savings Bank Life Insurance in Massachusetts has offered this type of a policy to the state's savings banks, declaring that the insurance departments of savings banks could provide this protection at a lower cost than insurance companies.

SAVINGS-BANK LIFE INSURANCE

Savings-bank life insurance has been in existence in Massachusetts more than thirty years and has displayed a very steady growth. At the present time, about two-thirds of the savings banks in that state are either issuing or agency banks for this type of

insurance. At the end of 1939, more than \$170,000,000 of this type of life insurance was in force in Massachusetts.

Savings banks, for a number of reasons, are in a position to offer life insurance in limited amounts at a lower rate than insurance companies, actual proof of which can be obtained by comparing the rates charged by savings banks in New York or Massachusetts with those published by life insurance companies. Overhead costs are substantially reduced, for savings institutions do not employ salesmen to solicit. Offices must be maintained as a necessary part of their business in any case, and space is set aside for a life insurance department. During slack seasons, regular employees are transferred to this type of work.

Since January 1, 1939, savings banks in the State of New York have been permitted to establish life insurance departments. Within the first year, more life insurance was in force in New York than in Massachusetts after the plan had been in effect eight years. The recent investigation of the life insurance business by the Federal Temporary National Economic Committee, the rapid growth of life insurance counselors, and state restrictions imposed upon industrial life insurance are likely to stimulate the introduction of such legislation in other states. The experience in New York seems to indicate that the sale of life insurance has acted as a great attraction to additional depositors. More than half of the policy-holders have never been depositors of any savings bank. Most of the many new savings accounts contemplate small regular deposits from which life insurance premiums are to be deducted.

In connection with the sale of life insurance, certain restrictions are placed on savings banks. In the State of New York, only residents are eligible; the amount issued to any person by any one bank cannot exceed \$1,000, and no more than \$3,000 can be issued to any one person by all the banks. Assets and operations of savings and insurance departments must be segregated; the assets of the latter are in no way subject to the liabilities of the former. The law provides that the funds of the insurance department of a bank may be invested in the same classes of securities as the savings deposits.

TYPES OF SAVINGS INSTITUTIONS

Since savings are accepted and invested by a number of different institutions, we shall now consider these types. Of the four different types of banks, which now carry savings deposits, the mutual savings banks have the greatest volume — \$10,384,874,000. The national banks follow with \$7,692,878,000, and state banks, with \$4,158,700,000. Trust companies have \$2,808,305,000. Private banks, which have practically disappeared except in New York and Pennsylvania, show only \$36,190,000 in savings deposits.

Mutual savings banks. — Mutual savings banks were originally established as benevolent institutions intended to provide protection against future want of wage-earners by stimulating thrift among them. While in the mind of the public, and often in that of state legislators, they still retain a certain benevolent aspect, they are today operated on the same basis as any other banking enterprise. Mutual savings banks operate in eighteen states, most of which are along the eastern seaboard from Maine to Maryland. These institutions were first established in this country in 1816, only six years after the founding of the first mutual savings bank in Scotland, and for more than one hundred and twenty-four years have played an important part in the nation's economic life, particularly during the times when capital was badly needed to develop this country. On December 30, 1939, there existed 542 of these institutions, representing 14,193,058 depositors with deposits amounting to \$11,825,276,000.

Mutual savings banks do not issue capital stock, but are organized by individuals who assume the responsibility as trustees and, as such, manage the bank. They receive no pay except certain small fees. Their position is looked upon as one of prestige, a factor which may, however, indirectly increase the earning of a lawyer or investment banker-trustee. Profits are made for the mutual benefit of the owner-depositors and partly paid out in the form of dividends as interest on deposits and partly retained to increase the surplus.

Many of these banks restrict the amount of deposits which they are willing to accept from any one depositor; in a number of states, the amount is fixed by statute. Special legal restrictions are placed on the types of investments made by mutual savings banks. In almost all instances, investments must be in the form of fixed-

income-bearing securities. The eligibility list has been greatly curtailed by business trends during the last few years and by the fact that new issues have been taken over by one large purchaser, for example an insurance company, to avoid registration with the Securities and Exchange Commission. For these reasons it has been stated at times that the present list of "legals" is more or less inadequate to permit proper diversification of portfolios.

These banks have been operated with extreme conservatism and great success, which is proved by the fact that only approximately 10 per cent of the mutual savings banks have considered it advisable to join the Federal Deposit Insurance Corporation. Also, the amount of capital notes and debentures sold by these banks to the Reconstruction Finance Corporation was slightly above 1 per cent of their surplus, undivided profits, and reserves. The average annual loss for each \$100 of deposits during the period 1865-1934 was estimated to be \$0.017.

During the first year of the Federal Deposit Insurance Corporation almost four times as many mutual savings banks as are now members of the corporation were insured. The average mutual savings bank considered itself a preferred risk, however, and wished to avoid assessment at the same rate as that of commercial banks. These institutions also desired to avoid responsibility for the losses of commercial banks.

Upon the inception of the permanent deposit insurance plan, the former practice of insuring the deposits of mutual savings banks in a separate fund was discontinued, and this fund and the fund for commercial banks were consolidated. Although Congress, through an amendment to the Act in 1935, permitted the establishment of separate funds and lower assessment rates for mutual savings banks, the Federal Deposit Insurance Corporation considers it inadvisable, from its standpoint, to establish separate funds as a revision of its assessment policy might then become necessary. The mutual savings banks, on their part, have established state organizations providing discount facilities and deposit insurance. In the State of New York, for example, three instrumentalities have been established by the mutual savings banks of that state. (1) The Savings Banks Trust Company has been established to furnish liquidity to savings banks through the purchase of their securities or by making loans to them against pledged assets. In addition to

this and other services, an investment information service for the assistance of savings banks in the administration of their bond portfolios is provided. As a trust company, this institution acts as trustee for savings banks whenever necessary. (2) A Mutual Savings Banks Fund has been created for the insurance in full of deposits in savings banks. All member banks are subject to assessments aggregating 1 per cent of their total deposit liabilities. In addition, a sum equivalent to $1/10$ of 1 per cent of its deposit liabilities is to be paid annually by every member bank. (3) The Institutional Securities Corporation has been organized to purchase mortgages from savings banks and thus to provide a central market for mortgages held by them. Other services have been extended in addition to this original one, for example the servicing of mortgages and management of real estate for savings banks.

Under the Federal Reserve Act as amended, mutual savings banks may join the Federal Reserve System. However, since many states prohibit them from subscribing to a capital-stock issue, and since the alternative of maintaining a deposit of $6/10$ of 1 per cent of their total deposit liabilities with their respective Federal Reserve bank is not very attractive to mutual savings banks, only a few of these banks have applied for membership. They may also become members of the Federal Home Loan Bank System, enjoying the privilege of borrowing up to twelve times the amount paid in by them on their capital-stock subscription.

Mutual savings institutions are organized on the unit basis; only a few have branches. In view of the trend in the field of commercial banking toward branch banking, it may well be that they too will find it advisable to branch out.

Savings departments in commercial banking and trust institutions. — According to the *Report of the Comptroller of the Currency* for 1938, the following amounts and types of savings deposits were held by these institutions:

	<i>Pass-Book Deposits</i>	<i>Time Certificates</i>	<i>Total Time Deposits</i>
National Banks.....	\$ 6,618,863,000	\$ 581,595,000	\$ 7,200,458,000
State Commercial Banks and Loan and Trust Companies..	5,560,215,000	669,736,000	6,229,951,000
Total.....	\$12,179,078,000	\$1,251,331,000	\$13,430,409,000

As previously pointed out, the National Bank Act failed to distinguish between demand and time deposits in fixing the legal-

reserve requirements to be held against deposits. This fact placed the state banks in an exceedingly favorable position compared with the national banks. Moreover, the latter were not expressly authorized to receive time deposits, a fact which made the continued practice of accepting them rather questionable, as a number of states had passed legislation to restrict the business of savings banking to institutions specifically designated for that purpose. The provision of the Federal Reserve Act of 1913 fixing legal-reserve requirements against time deposits at a considerably lower rate than those against demand deposits removed this disadvantage of national bank charters and made this part of the banking business explicitly legal and more profitable.

During the period 1913-1929, time deposits in both national and state banks grew rapidly. The main explanation was apparently that many bankers induced customers to shift funds from a demand to a time basis in return for a higher rate of interest because of the lower reserves required on such deposits. A fourfold increase in time deposits during this period led to a demand for greater flexibility and freedom in the purchase of long-term securities and the extension of real estate loans. The McFadden Act of 1927 expressly authorized national banks to purchase securities and make real estate loans up to 50 per cent of their savings deposits. Many states likewise increased the degree of freedom of their banking institutions to make loans and investments.

The recent depression emphasized the weak position of savings depositors in national and state commercial banks. The segregation of assets during the 1920's, the establishment of legal limits for maximum amounts to be accepted, the compilation of a legal list for securities, and insistence upon the enforcement of stipulated withdrawal notices would have curtailed the losses eventually suffered.

Postal savings. — As far as banks are concerned, postal savings has ceased to be of importance. In 1933, out of total postal savings of \$1,184,948,000, \$765,887,000 was redeposited in banks; on June 30, 1939, out of a total of \$1,262,187,000, only \$77,172,000 (6.11 per cent) was redeposited in banks. In other words, postal savings has been of considerable help to the federal government in financing its deficit.

The Postal Savings System was established in 1910, in spite of the

violent opposition of American bankers who felt that the country's banking facilities were adequate and who opposed the government's interference with private business. The sponsors of the system claimed that many immigrants had been accustomed to having postal savings in their native countries and distrusted banks, that hidden hoards of money would be brought back into the financial current, and that large amounts mailed by immigrants abroad for deposit in their homeland would be kept in the United States.

The maximum deposits of any one depositor is at present \$2,500. A number of attempts have been made to have this amount raised to \$5,000. Certificates of deposits issued are nontransferable and nonnegotiable. Recently, depositors have been encouraged to exchange their savings for United States Securities paying $2\frac{1}{2}$ per cent interest, redeemable in one year and payable in twenty years. A 5 per cent reserve in lawful money is to be kept with the Treasurer of the United States against all deposits. The trustees of the system — the Postmaster General, the Secretary of the Treasury, and the Attorney General — may authorize postmasters to redeposit such savings with local approved banks which must either insure them or pledge adequate collateral for their protection. Redeposits of postal savings are limited to the amount of a bank's capital and one-half of its surplus. Interest to be paid by the depository banks must be above that paid by the post offices. Any excess of funds not redeposited or retained as reserve may be invested in securities of the United States, at the discretion of the board of trustees.

As a result of widespread distrust in banks, postal savings rose from \$153,644,000 in 1929 to \$1,184,948,000 by 1933; during the last six years it has exceeded this level only slightly. One explanation for the apparent freezing of the volume of postal savings is attributed to the sale of United States savings bonds through post offices. From March 1, 1935, to the end of 1939, more than \$2,300,000,000 were sold at post offices and to money-order applicants. In view of the cessation of the need for immigrant education, and in view of Federal Deposit Insurance and of the duplication of service rendered by banks in the same area, there seems to be little need for the continuation of postal savings under present conditions.

Stock savings banks. — Stock savings banks are private profit corporations which obtain their capital from shareholders and pay

dividends from accrued earnings. They are state banks, located mainly in the Middle West, and are organized with rather small capital funds. On December 30, 1939, the total resources of these institutions, numbering three hundred and twenty-four at that time, were \$1,200,000,000. As they accept both time and demand deposits today, the office of the Comptroller of the Currency includes them in the statistics of state commercial banks.

Cooperative savings institutions. — These institutions are organized primarily for the promotion of thrift on a cooperative basis among special groups of individuals. The oldest among these are the building and loan associations, originally established in 1831 near Philadelphia. Today there are more than 10,000 of these institutions with a total membership of more than six million individuals and assets of approximately \$5,000,000,000. Practically all assets are invested in first mortgages on urban real estate. Funds are obtained through the sale of shares, which usually have a par value of \$250 and are paid for on the instalment plan.

During the 1920's, some of these institutions accepted deposits subject to withdrawal and gave shareholders the right to withdraw payments prior to the time at which the shares would have been fully paid up. Under these conditions, they were easily subject to failure. The Federal Savings and Loan Insurance Corporation, established in 1934, insures accounts in eligible building and loan associations up to \$5,000. Since 1933, the federal government has entered this field by providing that Federal Savings and Loan Associations may be established under the supervision of the Federal Home Loan Board.

In addition to federal and state building and loan associations, there are other institutions promoting thrift. Among these are credit unions supervised either by the state or the federal government, as well as a welter of fraternal societies.

Summary. — Savings banking probably has undergone greater changes during the last two decades than commercial banking. In a field characterized originally by an almost complete absence of competitors, there have entered insurance companies and divers state and federal savings associations. Retail merchandising establishments and finance companies have also come onto the scene. There was a time when savings institutions could have protested effectively against the improper use of such terms as

deposit, savings, and saving fund by life insurance companies. However, the fact that insurance companies are permitted to sell contracts involving the accumulation of a savings fund was rather effectively used to permit savings banks to combine savings and insurance.

If the increasing amount of literature on the question as to whether the United States has now reached the stage of economic maturity is any indication, savings and institutions related to the savings process are most likely to come in for a great deal of discussion, proposals, and, perchance, structural and functional reorganization.

The topic most debated since the economic collapse of 1929 has been the discovery of ways and means to raise the stream of national income to a higher level and maintain it at such a level. Savings are an important determinant of income. Any income received out of the productive process will either be expended on consumption goods and services, or be saved. If spent, it again enters the stream of income. Whether savings will feed into the stream of income will depend upon the disposition of them. When an individual cannot use the funds himself or cannot find a borrower who will use them for the purchase of capital or other goods, the income stream tends to dry up and unemployment prevails in the capital-goods industries. It is obviously essential that the entire part of the current flow of income which has not been expended on consumption shall be expended directly or indirectly through an intermediary investment institution on new plants or equipment. The larger the savings, the larger must be the outlets available for this capital accumulation in the form of equipment or plant expansion, and residential or public construction. As long as adequate investment outlets can be found for the volume of new savings, an economy will be dynamic. If outlets cannot be found, an economy will become stagnant, causing a large volume of chronic unemployment.

If we accept the belief that this country no longer provides the requirements necessary for a high-savings economy, savings institutions will not escape considerable alterations in the future.

THE INVESTMENT TRUST

An investment trust, similar to the institutions we have discussed in the preceding pages, pools the funds of a large number of individuals for whom it purchases securities. The trust members, in turn, receive shares in the common holding. Several types of these institutions exist.

1. *The general-management investment trust* is a corporation in which the management possesses practically complete freedom in shifting the trust's investments. It raises funds through the sale of its own securities (bonds, preferred stock, or common stock) to the investing public. Under this plan, a small investor will have the opportunity of obtaining expert management and proper diversification of his holdings with a greatly reduced risk.

The general-management investment trust was originally of British origin, and was introduced into the United States during the early 1920's. Instead, however, of adhering to the original British idea of facilitating foreign investments, in this country it adopted different forms of organization and operating principles. If properly conducted this type of trust is an exceedingly useful institution. During the depression of 1929, however, it was discredited as a result of its employment of funds for speculative purposes which led to a considerable number of failures.

2. *The fixed trust* or banker's share trust is primarily an American invention. Management plays little part in its operations. The investor's funds are placed in a specified list of securities; collateral trust shares in rather small denominations are issued against the portfolio; and the securities are held by a trust company for the investors under a trust agreement. Usually the trusts are established for a definite period, at the expiration of which the realized cash value of the investment holdings is divided among the owners.

3. *The limited management trust* occupies a position midway between the other two types. Its investments are not subject to frequent changes. Securities must be held throughout a given period and changes are usually occasioned by business consolidations or failures. The proportional distribution of the shares in the group is maintained.

Intermediary investment institutions, such as investment trusts and savings institutions, must not be placed in the same

category as investment banking institutions, i.e., houses concerned with the wholesaling and retailing of investment securities. The former are primarily interested in aiding the investing public; the latter deal chiefly with corporations.

SUGGESTIONS FOR FURTHER READING

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CHAPTER XVIII

THE GOVERNMENT EXTENDS CREDIT TO THE FARMER

The problem of farm credit. — Why should the financing of the farmer represent a problem different in many aspects from the financing of urban business interests? Both need long-term and short-term credit. Commercial banks exist to supply the latter; to obtain the former, manufacturers sell securities while farmers give mortgages as security for a loan. In spite of these facts great differences exist between business and farm loans.

The farmer's turnover is slow so that he has relatively little need for short-term loans. Farming is a process of production which affords no opportunity to invest borrowed capital in such a way that loans can be repaid in a short period. Even today when loans and investments of commercial banks have lost much of their short-term character, the average farm investment still possesses too long a maturity and lacks the shiftability so characteristic of other types of investments. Most individuals with an investable surplus on hand, are not familiar with farm conditions and therefore prefer to invest in urban business. A farm mortgage cannot be standardized. The mortgagee or his agent must make a thorough inspection of the mortgagor's character as well as a thorough inspection of his property. Only a person who is well trained for such work can act in such a capacity. The problem of improving the market for farm paper is for the lenders of capital one of eliminating the cumbersome and expensive process of inspection. In recognition of the fact that the farmer does not possess the opportunity for long-term financing comparable to that available to corporate industry through the device of security issues and investment houses, the Federal Farm Loan system was created.

Early attempts at farm financing. — During colonial days repeated efforts were made to furnish funds to the farmer by creating private and public land banks or loan offices. Landowners in need of capital would organize an association known as a land

bank, the organizers giving mortgages on their properties to the bank for which they would receive notes from the bank, intended to pass as currency. The subscribers did not pay money into the institution, so that no capital or reserve existed. Redemption of the notes in various commodities at a definite price or in specie was usually to be made after twenty years. These "batches of paper money" confused ultimate redemption with immediate redemption. It was thought that the pledge of real estate mortgages would be sufficient to guarantee and maintain the parity of the notes. Issuance of currency on this basis was inflationary since large amounts of money were suddenly injected into the financial system without a simultaneous creation of additional goods or services. Needless to say, these experiments ended in failure.

The public loan offices made their loans for long periods on a similar basis. As soon as loans were made, the circulation of money was increased with the result that prices became inflated. Loanable funds were provided, but under a redistribution of property by means of inflation. The fact that these land banks were government institutions encouraged and invited all to share the benefits. Eventually bills were apportioned according to population in the various districts of a Colony in utter disregard of the principle that capital loans should be made only when they would be put to productive uses. Loans were constantly renewed and many were never repaid. Finally, many colonists petitioned the English Parliament to prohibit all such banking schemes and as a result of home as well as colonial pressure, Parliament responded by extending to the American Colonies the so-called Bubble Act of 1720, an act directed against speculation and fraudulent enterprises. Under it, note-holders were given the *immediate* right of redemption at the face value of the bank notes. This provision brought disaster to the land banks as well as to their supporters.

Events in the history of the Massachusetts Land Bank, organized in 1740 by the Massachusetts Assembly in answer to a request from the farmers, frontiersmen, and laborers, illustrate the friction which existed between debtor and creditor classes. £150,000 in paper notes secured by land and redeemable in twenty years in commodities were to be issued. No provisions for a capital stock issue of the bank were made. The creditor class fought the land bank scheme by establishing a "silver bank" which undertook to issue notes based

on silver. Attempts to induce the assembly to disestablish the land bank failed because that body was dominated by the debtors. As entreaties and warnings to the public not to use the land bank notes were without avail, the members of the creditor group joined hands with the London merchants, who had also suffered from colonial paper inflation, in petitioning Parliament for relief.

A similar type of institution developed in the southern states prior to the Civil War. The so-called property banks, all state institutions, attempted to attract capital for agricultural loans by issuing and selling bonds secured by farm mortgages. In addition to handling farm mortgages, they enjoyed the privilege of issuing bank notes and acted also as commercial banks. Since they were state institutions, they usually fell prey to pressure groups in the state legislature. In some instances, pressure groups were instrumental in forcing the passage of laws providing for the annual election of bank officers by the state legislature. Candidates for the state legislature bought votes by promising loans to their supporters. In addition to such practices, loans were made through the issuance of post notes. The banks were allowed to deal in real estate and engage in commodity speculation. The attempts on the part of property banks to extend farm credits also ended in failure, with tremendous losses to the states involved.

By the turn of the twentieth century, the American farmer was producing for a continuously widening market with expensive machinery, a situation which increased his need for suitable credits. Soon after the outbreak of the World War in 1914, the demand for American farm products increased sharply. As a result, land values rose and the farmer needed more capital to enable him to purchase more machinery, without which more land could not be cultivated. As early as 1908 President Theodore Roosevelt had appointed the Country Life Commission to study farm needs. President Taft sent a commission to Europe to make a study of European rural credit institutions. Upon its return, several bills were introduced in Congress to provide a system of long-term amortized farm loans. According to this proposed legislation, farm loans would be financed through the sale of bonds in the country's money markets. Later, President Wilson created another commission whose detailed report on rural credit, submitted in 1913, had a marked influence on subsequent legislation.

The federal farm program. — In 1912 the platforms of both major political parties contained a plank on rural credit. As a result, a bill was introduced in Congress in 1914 which culminated two years later in the Farm Loan Act of 1916. This act was intended to provide capital for agricultural production, to create a standard form of investment based upon farm mortgages, to lower and equalize rates of interest upon farm loans, and to perform certain other fiscal functions.

The act created a Farm Loan Board under whose jurisdiction were placed two types of rural credit institutions; the one, the federal land bank, was to provide long-term capital loans to farmers on mortgages as security and was to combine the joint efforts of farmers and the government in the form of cooperative land banks, and the other, the joint stock land bank, was intended for identical purposes, but was to be established through private initiative.

The powers of the Federal Farm Loan Board, enlarged in 1923 and 1929 and reorganized in 1933 as the Farm Credit Administration,¹ were similar to those of other agencies charged with the supervision of banking activities, namely:

1. To charter federal land banks, national farm loan associations, and joint stock land banks under the Act of 1916, and, at its discretion, to authorize increases in their capital stock.
2. At its discretion, to revise and alter interest rates charged, the rates to be as uniform as practicable.
3. To grant or refuse to the new credit institutions authority to issue farm loan bonds.
4. To establish rules concerning the charges to be made to borrowers for expenses in appraisal, determination of title, and recording.
5. To demand reports and statements of financial condition.
6. To prescribe the form and terms of farm loan bonds including any surety bonds required.
7. To remove or suspend any official of the institutions coming under its jurisdiction and to exercise a general supervisory authority over all activities.

¹ Under the Reorganization Plan of 1939, the governor of the Farm Credit Administration was made responsible to the Secretary of Agriculture rather than to the President, as he had been since 1933.

FARM CREDIT ADMINISTRATION District Boundaries and Location of District Units

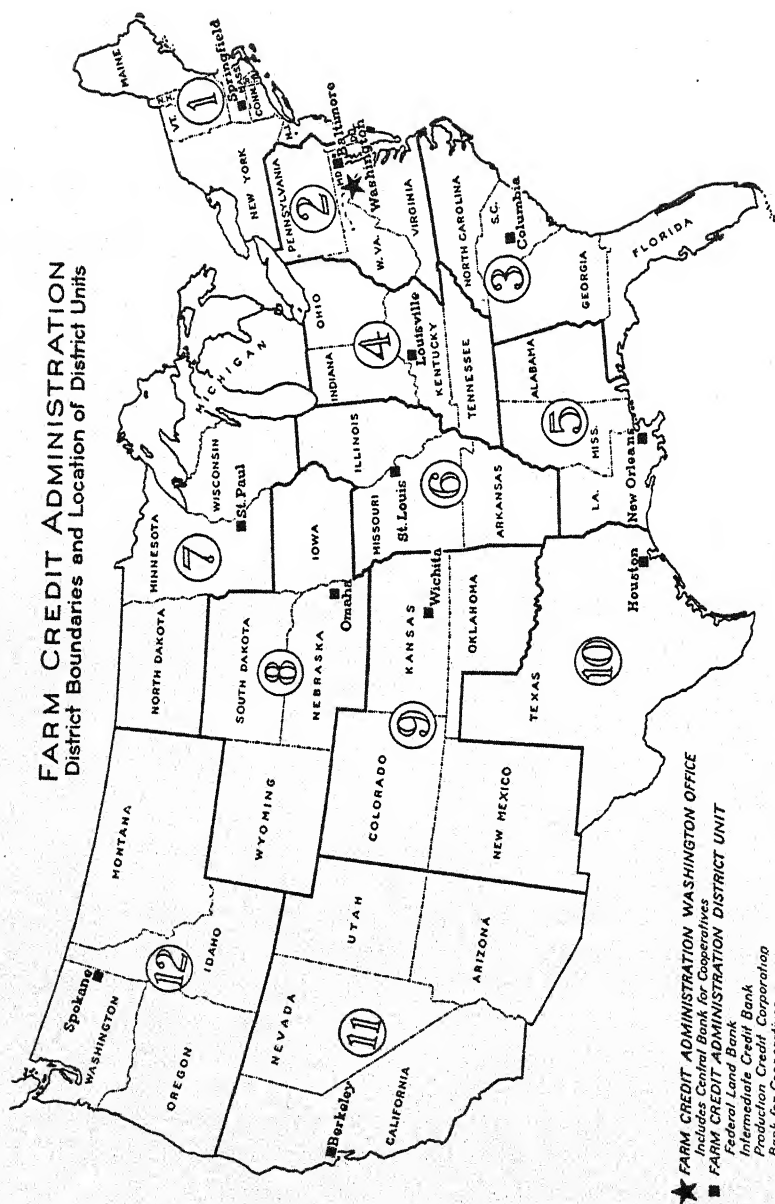


FIG. 25

LONG-TERM CREDIT FOR AGRICULTURE

The federal land banks. — The first task of the Farm Loan Board was to divide the continental United States, excluding Alaska, into twelve farm-credit districts, in each of which a federal land bank was to be located. In 1922, the Baltimore Land Bank established a branch in Puerto Rico. Funds were to be made available to farmers primarily through national farm loan associations.

Today the main function of these banks is the handling of long-term farm mortgage credit. Under the Act of 1916, they were empowered: (1) to issue and sell farm loan bonds which constitute the source of their loan funds, (2) to lend money on first mortgages on farms, (3) to use these mortgages as collateral for bonds to be issued, (4) to acquire and dispose of real estate acquired in satisfaction of unpaid loans, and (5) to perform all other necessary acts in connection with farm-mortgage lending.

Capital. — Originally, each land bank was to be capitalized at \$750,000, in shares of \$5 each. The total for the system was to be \$9,000,000, and subscription was to be open to the public. Practically all the original stock was subscribed by the government. Outside of this initial capital, additional loanable funds were to be derived from the sale of debenture bonds secured by the first mortgages of borrowers or by United States bonds.

Capital and surplus of the banks was not to be less than 5 per cent of the bonds outstanding. This was accomplished by providing that borrowers must invest \$5 in the banks' stock for every \$100 borrowed, the investment to be surrendered upon repayment of the loan. Thus, an automatic ratio of 20 : 1 was established between capitalization and loans. The limitation of loans was to be left to the discretion of the supervisory authority and was to be determined in general by the need for funds and by the state of the bond market.

During the depression of the 1930's, the additional demand for loans increased materially so that the government subscribed additional capital stock. Congress also authorized the Treasury to subscribe to the paid-in surplus of banks in order to reimburse them for granting extensions to worthy borrowers who are faced with temporary difficulties. Table 27 shows the status of all federal land banks as of December 31, 1939.

TABLE 27. PRINCIPAL ASSET AND LIABILITY ITEMS OF THE FEDERAL LAND BANKS

(December 31, 1939)

<i>Assets</i>	
Mortgage loans.....	\$1,896,213,257
Purchase money mortgages and contracts.....	95,015,980
Extensions.....	4,999,409
Delinquent installments.....	40,476,864
Accrued interest receivable (not due).....	27,674,864
Cash and government securities.....	139,102,573
Due from the Secretary of the Treasury.....	8,424,207
Real estate.....	105,207,140
Sheriffs' certificates, etc.....	20,687,186
Loans called for foreclosure, judgments, etc.....	19,759,881
Other assets.....	14,614,446
Total assets.....	\$2,372,175,526
<i>Liabilities</i>	
Farm loan bonds outstanding.....	\$1,742,834,940
Matured obligations.....	2,940,142
Notes payable.....	4,556,400
Accrued interest payable (not due).....	19,072,555
Other liabilities.....	14,878,893
Valuation reserves.....	72,003,194
Capital stock*.....	236,475,965
Paid-in surplus.....	187,875,360
Legal reserve.....	56,921,682
Reserve for contingencies.....	19,994,204
Earned surplus.....	5,000,000
Undivided profits.....	9,622,191
Total liabilities.....	\$2,372,175,526

Source: *Seventh Annual Report of the Farm Credit Administration, 1939.*

* Of this amount, national farm loan associations owned \$107,786,870, or 45.6 per cent; the U. S. Government, \$125,000,000, or 52.8 per cent; the remainder being owned by direct borrowers and by borrowers through agents.

Sources and types of loans. — Despite the name “federal” land bank, these institutions obtain most of their loanable funds from the sale of farm loan bonds to private investors. During unfavorable bond-market conditions, such as prevailed during 1929 to 1932, bonds are sold to the Federal Reserve banks. They have also been used as collateral in borrowing from the Reconstruction Finance Corporation.

Prior to the issue of any bonds, an aggregate amount of approved first mortgages on farm property or government bonds, at least equal to the amounts to be issued, must be deposited with a farm-

loan registrar, a federal officer. The collateral pledged must be approved by both the land bank division of the Farm Credit Administration and the farm-loan registrar. Before the loan is made, each piece of property is appraised.

Loans may be made for the following purposes:

1. To purchase farm land for agricultural uses.
2. To purchase equipment, fertilizer, and livestock for the mortgaged farm.
3. To provide buildings and to improve farm lands.
4. To liquidate indebtedness incurred prior to January 1, 1937.
5. To provide farmers with funds for general agricultural uses.

Loans may be made to any person engaged or to be engaged in farming or raising livestock or to any person the principal part of whose income is derived from farming operations. Loans may also be extended to corporations engaged in the raising of livestock. Loans may not be made in amounts less than \$100 or more than \$50,000. A loan larger than \$25,000 must be approved by the land bank commissioner who supervises all land bank activities. No loan may exceed 50 per cent of the appraised normal value of the land to be mortgaged, plus 20 per cent of the appraised value of the permanent insured improvements on the land. All federal land bank loans are made on an amortization basis with maturities ranging from five to forty years and provide for periodic payments which include payments for interest and principal.

Appraisals. — The land bank commissioner who, after the reorganization of farm credit under the Farm Credit Administration in 1933, became supervisor of the twelve federal land banks, appoints the land-bank appraisers — the “eyes and ears” of these institutions. It is their function to obtain such indispensable information as: the value of the property involved, the amount to be lent and the terms involved, the applicant’s financial condition, and his management of the property.

Farms are appraised on the basis of their ability to produce agricultural income which, of course, involves a price problem. At present, averages of the commodity prices received by farmers during the period from 1909 to 1914, with allowances for changes in the economic position of certain products, are used as the basis for determining earning power. While a farm’s earning power is a principal factor in its valuation, such other factors as location, the

desirability of the farm as a home, and hazards entering into production and marketing of crops will affect the future value and earning power of the pledged security. Applicants and borrowers are charged a fee based upon the average cost of appraisals to the bank. In case the application is rejected, the bank is entitled to retain that portion of the fee which represents its appraisal charge.

Management and supervision. — In 1933, the name of the Federal Farm Board was changed to the Federal Farm Credit Administration, and a number of changes were made with regard to its powers and organization. At present, each federal land bank is managed by the farm credit board of the particular district (see Figure 26). Each of the twelve district boards consists of seven directors, who are directors *ex officio* of the federal land bank and of the other credit institutions in their district. The board, as is usually true of other similar organizations, appoints the officers of the bank. The Farm Credit Administration through the governor and the land bank commissioner exercises supervisory and regulatory powers over federal land banks. Periodic examinations are made and statements of conditions must be submitted. In addition to these functions, the Farm Credit Administration attempts to coordinate and standardize, as far as is feasible, the operations and practices of the federal land banks and to coordinate the activities of the land banks with those of other organizations (to be discussed in the following pages) under the Farm Credit Administration, in order to provide a complete system of farm credit without duplication of services.

National farm loan associations. — National farm loan associations, of which there were as of December 31, 1939, 3,722 in operation, are cooperative credit organizations of borrowers, through which federal land bank loans are usually obtained, organized on a community or county basis. Any suitable group of at least ten farmers with a total of at least \$20,000 of applications for mortgage loans can submit to the land bank of a particular district, its application for loans, articles of association, bylaws, organization plans, and a request for a charter. After due investigation, the eligibility of the group is considered.

These groups, over which the Farm Credit Administration exercises supervision, have two main functions: first, the initiation and

endorsement of loans, and second, the collection of maturing instalments. At times, a federal land bank may depend upon an association for the management and sale of property owned by the bank within an association's territory. In assuming these functions, the associations comply with certain standards established by the Farm Credit Administration in order to assure efficiency and economy. Membership in an association is limited to borrowers from the land bank. Members own or subscribe to stock in an association. Membership ends when the loan has been repaid and the stock in an association owned by the borrower has been retired.

TWELVE FARM CREDIT DISTRICTS

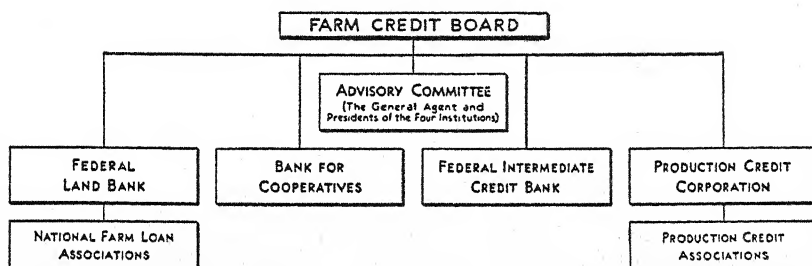


FIG. 26. ORGANIZATION OF THE FARM CREDIT DISTRICTS

Capital stock. — A borrower buys stock in an association equal to 5 per cent of the amount of his loan and is entitled to one vote regardless of the amount of stock he holds. The member's stock is pledged to the association as collateral security for the loans endorsed by it. An association, in turn, subscribes to an equal amount of stock in the federal land bank, held by the bank as additional collateral security for the loans endorsed by that association. If an association is not in debt to the bank upon repayment of the loan, this stock is retired by payment in cash. If an association is in debt to the bank as a result of losses sustained by the bank on loans endorsed by that association, part or all of the proceeds of the stock is retained.

Since 1937, under special conditions, land bank loans have been made through national farm loan associations whose capital stock has been impaired through losses. In such cases, the new and the old members of the associations constitute separate groups with separate stock issues. Earnings are allocated between the groups

and reserves are maintained separately. No intergroup liability exists except in regard to operating expenses.

In localities without an active association, the land bank may make direct loans subject to the provision that borrowers purchase the bank's stock to the extent of 5 per cent of the loan. Direct borrowers usually unite with other such borrowers to form an association when ten or more borrowers can be found. After an association has been formed, the stock which each member holds in his federal land bank is canceled and an equal amount of stock is issued in the name of the association which is to be held as collateral. The association then issues capital stock to each member equivalent to the amount of stock previously owned by him in the bank. This stock, as has been stated, is held as collateral against his mortgage loan and is retired upon repayment of the loan.

In the past, many farm loan associations have been formed without due regard to the question of normal trade areas so that many organizations served overlapping territories. In order to eliminate such structural maladjustments, federal land banks have provided for the establishment of joint offices for two or more associations located in the same logical trade area. In some instances, two or more associations have been consolidated into a single association in order to create stronger individual associations. For example, during 1939, 161 consolidation projects were completed, involving 456 associations.

Loans. — The prospective borrower must apply for a loan through his local association at which time he also applies for membership in the association. Upon approval of the application, he will receive the proceeds of the loan through the office of his association, minus charges for purchases of its stock and for loan fees.

The board of directors of an association must approve the loan application and, thereupon, submit it to the land bank for further scrutiny. The extent of the aid given by the associations to the land banks can be appreciated if one remembers that the title to the property must be cleared, the mortgages recorded, and usually, additional insurance contracted. The farmer's mortgage papers and note, endorsed by an association, become the security for the loan. An association also usually supervises the use of the proceeds since the loan can be employed only for approved purposes.

To summarize, the national farm loan associations do not make

loans, but only accept, approve, and submit applications for loans. The stock subscribed by farmer-borrowers constitutes the operating capital of an association, and the bank stock purchased by the associations normally furnishes the capital of the land banks. This capital is not used for loan purposes; it constitutes additional security for the bonds sold by the banks.

The Federal Farm Mortgage Corporation. — Because of conditions prevailing in the bond market during the depression of the early 1930's, the federal land banks found it impossible to sell their bonds to investors at an interest rate that would enable them to continue making loans at their accustomed low rate. In order to obtain the large volume of funds required in financing the lending operations of the federal land banks and the Land Bank Commissioner, the Federal Farm Mortgage Corporation was created in 1934, with capital amounting to \$200,000,000 and authorization to issue bonds amounting to \$2,000,000,000. During the years following, the Corporation floated its bonds either by exchanging them for the consolidated bonds of the federal land banks or by selling them on the market.³ The securities of the Corporation are guaranteed both as to interest and principal by the United States Government. This fact gave the corporation's bonds a wider market at lower rates of interest than the bonds of the federal land banks, which are not guaranteed by the government. The federal land banks were thus enabled to finance a large volume of their loans at very low rates. With the improvement in the bond market, the federal land banks resumed the sale of their own bonds directly in the investment markets to obtain funds for new loans as well as for refunding purposes. The Federal Farm Mortgage Corporation continues, however, to provide funds for Land Bank Commissioner loans.

Land bank commissioner loans. — Under the provisions of the Emergency Farm Mortgage Act of 1933, Land Bank Commissioner loans are made upon the security of first or second mortgages on farm property. These loans are made by the commissioner through the facilities of the federal land banks.

Funds are advanced by the land bank commissioner for the same purposes as land bank loans and to the same classes of borrowers.

³ Since its organization, this corporation up to December 31, 1939, had issued bonds aggregating \$1,676,559,000, of which approximately one-half were for the purpose of aiding federal land banks.

Moreover, any farm indebtedness may be refinanced without regard to purpose or the time at which the original debt was contracted. Indebtedness for which the farmer is not personally liable, but which is secured by a lien on his property, may likewise be refinanced through such a loan.

The total amount which the commissioner may lend to any one farmer must not exceed \$7,500, and the amount of the mortgage, together with all prior mortgages or other indebtedness secured by farm property, may not exceed 75 per cent of the appraised normal value of the property. In most localities, the applications for such loans are handled through the national farm loan associations. Loans are payable on an amortization plan maturing within an agreed period of not more than 40 years from the time the first payment is due.

On December 31, 1939, 439,076 loans were outstanding with an unpaid principal balance of \$690,879,811. During 1939, foreclosures were instituted on 3,467 first and 2,077 second mortgage commissioner loans. 7,787 farms were acquired during this period.

Table 28 shows the volume of business transacted by the various institutions which have been discussed in the preceding pages.

TABLE 28. FEDERAL LAND BANK AND LAND BANK COMMISSIONER LOANS

(Applications received, loans closed, and loans outstanding, 1933-1939)

Year	Applications received		Loans closed		Loans outstanding, Dec. 31	
	Number	Amount	Number	Amount	Number	Amount
1933	502,470	\$2,064,897,403	79,339	\$ 210,950,776	472,855	\$1,303,445,263
1934	402,829	2,043,653,392	496,501	1,283,503,456	953,643	2,532,616,762
1935	162,968	811,081,485	149,972	445,066,549	1,075,008	2,866,651,139
1936	84,030	375,504,853	65,291	186,427,995	1,094,810	2,900,936,491
1937	60,836	247,985,002	37,862	103,111,902	1,091,067	2,848,056,032
1938	58,719	231,940,745	31,624	80,813,517	1,076,861	2,735,074,803
1939	49,917	199,793,979	30,047	78,998,850	1,057,532	2,595,534,825

Source: *Seventh Annual Report of the Farm Credit Administration, 1939.*

Joint stock land banks. — The Federal Farm Loan Act of 1916 provided for the organization of joint stock land banks by private individuals for profit. At that time, Congress was unwilling for the

federal government to monopolize the rural credit field through its cooperative federal land banks and permitted private interests to supplement the government's activities. These institutions were to be formed by any group of ten or more persons with a minimum subscription of \$250,000. The charter was to be obtained from the Federal Farm Loan Board, which was to exercise general supervisory power over these banks. No loans were to be made in excess of 15 per cent of the capital stock or in excess of \$50,000 and loans were to be made upon the security of first mortgages on farm real estate from funds derived from the sales of tax-exempt bonds to the investing public. The proceeds of the loans were to be used only for agricultural development.

Since 1926, the number of loans made by these banks has decreased greatly. A number of factors are responsible for this. The high money rates prevailing in the second half of the 1920's made it impossible to sell joint stock land bank bonds at satisfactory prices. Moreover, several of these banks have failed and since investors have erroneously believed them to be jointly liable for all outstanding securities, they have refused to purchase the bonds of any of the banks. Probably the main explanation for the decline in loan activities is to be found in the fact that the banks could not charge an interest rate on their mortgages which would exceed by more than 1 per cent the rate established for the last series of their farm-loan bonds. The maximum rate could not exceed 6 per cent. We have stated before that capital does not flow into banking businesses for any other reason than the gain which can be derived from the performance of banking functions. In view of the small margin of interest which the joint stock land banks were permitted to charge, substantial profits could be made only by obtaining a large volume of loans. This tempted the banks to make loans wherever possible regardless of the advisability of such loans. The fact that these banks did not require a stock subscription, as was true of the federal land banks, also attracted many borrowers. From April 1917 to July 1931, eighty-eight charters were issued to joint stock land banks by the Federal Farm Loan Board.

The Emergency Farm Mortgage Act of 1933 provided that after May 12 of that year none of the joint stock land banks could issue tax-exempt bonds or make farm loans, except where it is necessary in order to finance existing bond issues or loans, or in order to sell

real estate acquired by the banks. On December 31, 1939, thirty-five banks were in the process of liquidation and six were in receivership. Approximately 70 per cent of the assets of joint stock land banks have been liquidated and 75 per cent of their bonds have been paid off. Loans from joint stock land banks have been refinanced through the federal land banks.

INTERMEDIATE-TERM CREDIT FOR AGRICULTURE

Federal intermediate credit banks. — The severe price deflation and the concomitant financial stringency following the World War caused widespread demand for other rural credit facilities besides the already existing federal and joint stock land banks. The fall in the prices of agricultural commodities after 1919 prevented farmers from liquidating their loans to the country banks. In addition, the volume of deposits in these banks decreased greatly. In desperation, the country banks sought to reduce their loans and borrow from large city banks. By that time, however, war and postwar financing had more or less exhausted banking resources and credit expansion had to be stopped. In view of the difficulties which both farmers and country banks faced, farm leaders believed that it was the responsibility of the government to provide better short-term and intermediate-term credit facilities for the farmer. It was argued that loans with maturities between those granted by country banks and those granted by the federal land banks were needed. In the absence of such intermediate credit facilities, farmers were dependent upon renewal privileges extended to them by commercial banks on their short-term loans. When hard pressed, as they were during the years immediately following the World War, banks refuse to renew loans, and insist upon repayment.

After much debate, Congress finally passed the Agricultural Credits Act of 1923 which provided, among other things,⁴ for the establishment of twelve new banks, each to be known as a federal intermediate credit bank and to be created as a separate division of the twelve federal land banks.

⁴ National agricultural credit corporations, privately financed, were to be chartered and supervised by the office of the Comptroller of the Currency. Only three such corporations were ever created, two of which were liquidated after one season's operations; the third is now being liquidated.

Organization and supervision. — Each federal intermediate credit bank is supervised by its district farm credit board, as provided by the Farm Credit Act of 1933. Each such board is, *ex officio*, the board of directors of the district federal land bank, federal intermediate credit bank, bank for cooperatives, and production credit corporations; the latter two will be discussed in the remaining pages of this chapter. In addition, broad regulatory powers are vested in the governor of the Farm Credit Administration and the Intermediate Credit Commissioner (see Figure 27).

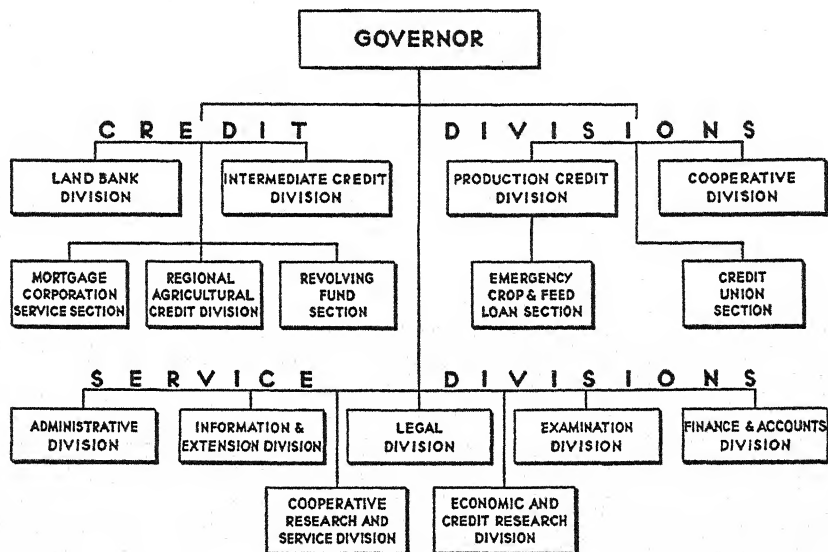


FIG. 27. FARM CREDIT ADMINISTRATION, WASHINGTON OFFICE

Capital. — Originally, the twelve federal intermediate credit banks had an authorized capital of \$60,000,000 subscribed by the Secretary of the Treasury. In 1934, however, additional capital was provided under the Federal Farm Mortgage Corporation Act so that these institutions now possess a paid-in capital of \$70,000,000 and \$30,000,000 of paid-in surplus, in addition to their earned surplus and undivided profits (see Table 29). Under the 1923 Act, 50 per cent of net earnings was to be paid to the government as a franchise tax, a provision which was changed later to stipulate that all net earnings should be credited to the surplus account until such surplus equalled the subscribed capital stock of each bank. After

this, one half of the earnings should be paid again as a franchise tax. In 1937, this tax was reduced to 25 per cent. The total franchise tax paid by the banks to the federal government from their organization through December 31, 1939, amounted to \$4,683,244. In addition to this sum, earnings of \$19,160,385 (surplus, reserves for contingencies, and undivided profits) have accumulated, which belong to the government as the only stockholder.

Funds for lending operations are obtained largely through the flotation of short-term securities. The federal government assumes no liability for such paper. Subject to the Intermediate Credit Commissioner's approval, any federal intermediate credit bank may rediscount eligible paper with a Federal Reserve bank or another banking institution, a privilege which has been used sparingly. Since 1935, the banks have preferred to issue consolidated debentures for which all twelve banks are jointly and severally liable. Under the law, the total amount of obligations outstanding must not exceed ten times the surplus and paid-in capital. These issues may mature in five years, but the majority of debentures which have been issued carry maturities not in excess of one year. The obligations of these banks are secured by notes representing their loans, and by cash and government bonds.

The rate borne by the last preceding issue of debentures determines under the law the maximum rate of interest which may be charged by a federal intermediate credit bank. Rates of discount may not exceed by more than one per cent the rate borne by the last preceding issue. A note is not eligible for discount, or as collateral for a loan, if the rate of interest which was charged at the time the loan was made exceeded the discount rate of the respective intermediate credit bank prevailing at that time by more than 3 per cent per annum. Since the beginning of 1939, discount rates of all federal intermediate credit banks have been $1\frac{1}{2}$ per cent a year.

Functions. — Federal intermediate credit banks are not permitted to make loans to individuals. They are authorized to discount the notes given by farmers and stockmen to local production credit associations, regional agricultural credit corporations, state and national banks, privately capitalized agricultural credit corporations, incorporated livestock loan companies, and similar organizations. The notes must be endorsed by the institution presenting them for discount. Loans may be made to such institutions on the

security of eligible paper. Production credit associations and banks for cooperatives may obtain loans on the security of collateral approved by the governor of the Farm Credit Administration. The proceeds of loans made must be employed in seasonal production and the marketing operations of stockmen and farmers, as distinguished from the long-term amortized farm mortgage loans. As a rule maturities of paper discounted range from three to twelve months. They may be extended, however, as long as three years.

TABLE 29. BALANCE SHEET OF THE TWELVE FEDERAL INTERMEDIATE CREDIT BANKS

(December 31, 1939)

<i>Assets</i>	
Loans and discounts:	
Financing institutions (net).....	\$180,152,678
Cooperative associations.....	1,834,729
Banks for cooperatives.....	17,911,063
Cash on hand and in banks.....	52,707,047
United States government obligations, direct and fully guaranteed...	74,799,537
Other assets (net).....	<u>1,358,375</u>
Total.....	\$328,763,429
<i>Liabilities</i>	
Unmatured debentures outstanding.....	\$207,200,000
Other liabilities.....	2,403,044
Capital stock paid in.....	70,000,000
Surplus paid in.....	30,000,000
Surplus earned.....	16,460,385
Reserve for contingencies.....	<u>2,700,000</u>
Total.....	\$328,763,429

Source: *Seventh Annual Report of the Farm Credit Administration, 1939.*

SHORT-TERM CREDIT FOR AGRICULTURE

Production credit associations.—The ten years' experience of the federal intermediate credit banks from 1923 to 1933 demonstrated that farmers could not furnish the funds necessary to set up local credit corporations which, in turn, could avail themselves of the discount privilege extended by these banks. Since commercial banks and other private lending institutions were not always able to meet all the credit needs of agriculture, Congress decided to aid in the establishment of local cooperative credit organizations. Under the Farm Credit Act of 1933, which was intended to bring under one organization all existing federal agencies dealing with

agricultural credit, production credit associations were organized. On December 31, 1939, there were five hundred and twenty-eight associations in active operation with a membership of more than two hundred and fifty thousand farmers and stockmen. The function of production credit associations is to supply farmers and stockmen with short-term credit for all types of farm operations. For this purpose, they must have sufficient capital as a backlog for their discounts with the federal intermediate credit banks.

Capital stock. — The capital stock of the production credit associations is divided into two classes, A and B. Class B, or voting, stock is owned by farmer-borrowers in an amount equal to \$5 for every \$100 borrowed. After repayment of a loan, a class B stockholder may retain his stock in order to obtain a new loan, or he may sell it to another borrower. When two years have elapsed after the repayment of a loan and no new loan has been contracted, a holder of class B stock is required either to sell it to another borrower or to exchange it for nonvoting A stock in order to assure that control of the associations belongs to active member-borrowers.

In addition to the small amount of nonvoting class A stock held by farmers, the production credit corporations (discussed later) have purchased principally class A stock to provide the necessary capital. On December 31, 1939, this stock amounted to \$75,030,874. Loans made during 1939 amounted to \$320,961,046. Since the establishment of these institutions in 1933, 1,312,446 loans were made amounting in all to \$1,441,801,080.

Production credit associations obtain their loan funds through the intermediate credit banks which sell bonds to the investing public. Since the associations are in a position to discount notes with these banks, the volume of loans made to members may be several times greater than the total amount of the paid-in capital. The ratio of capital to loans and discounts must not exceed 1 : 5. Otherwise, since all loans are guaranteed by the association, a few bad loans might wipe out the entire capital.

Types of loans. — The purposes for which loans may be extended include the financing of the production, harvesting, and marketing of crops, the breeding and marketing of livestock and poultry, and improvement of farm buildings. Crop loans usually possess a maturity of from three to twelve months. Maturity on livestock loans is usually twelve months and may be renewed. No loans

under \$50 are made. More than half of the loans made during 1939 were for amounts less than \$500.

Interest rate. — The interest rate on loans is determined by the rate at which debentures of a federal intermediate credit bank can be sold to the investing public. To this rate, the federal intermediate credit bank adds approximately 1 per cent to cover its costs of operations and to build reserves for future losses. The production credit associations add 3 per cent to this combined charge to pay for operating expenses and to build reserves. The organization of this production credit system has brought about for the first time in history a uniform rate of interest in every agricultural community in this country.

Territory served. — A production credit association, which is a cooperative organization, must possess a loan volume sufficient to produce earnings that will enable it to have competent management, cover operating expenses, establish reserves, and carry on its educational program. Hence the territory served is determined by the type of farming carried on in the area, number and size of farms, and the farmers' probable needs for credit. As a result of assigning to each association a definite territory within which to operate, destructive competition, such as has often characterized other types of cooperative organizations, is eliminated.

Production credit corporations. — Under the provisions of the Farm Credit Act of 1933, a production credit corporation was established in each of the twelve farm credit districts. The total capital of these institutions, subscribed and paid for by the Farm Credit Administration on behalf of the United States, is \$120,000,000, distributed according to the volume of credit needs of the various districts. Each production credit corporation has a board of directors composed of seven members who constitute the Farm Credit Board of each farm credit district. These directors also serve as directors for the federal land bank, the federal intermediate credit bank, and the bank for cooperatives of the district.

Although the production credit corporations were given three primary functions to perform, namely, to organize, to assist in capitalizing, and to supervise production credit associations, only the third remains as a major function. This is quite natural in view of the fact that today every rural county in the United States enjoys the service of a production credit association with sufficient capital

to meet all current demands for sound credit. The supervision of production credit associations by the production credit corporations includes the formulation and execution of management regulations, credit policies, and office and accounting procedures. In addition to these supervisory functions, assistance is being given to the associations in the extension of their credit facilities, in the education of their members, and in the training of their officers and employees. By such methods, unnecessary expenditures are eliminated and the administration costs of the credit service extended through the production credit associations are reduced to a minimum. Production credit corporations do not extend loans to farmers since these associations are the direct lending agencies of the production credit system.

The banks for cooperatives. — In view of the complex nature of services necessary to make farm products available to consumers, farmers have for many years created their own cooperative organizations for handling and marketing their products. Likewise, cooperative purchasing associations have sprung up to give farmers the advantage of large-scale buying for such basic materials as seed, fertilizer, insecticides, oil and gasoline, farm machinery, and package materials. Strong cooperatives tend to expand their activities either by combining marketing and purchasing, or by including other phases of processing of the products involved. Farmers' cooperative associations have existed in the United States for more than one hundred and twenty-five years; cooperative grain elevators were established as early as 1850. A survey completed in 1938 by the Farm Credit Administration showed that in 1936 there were more than 15,500 farmer-owned and farmer-controlled cooperative associations and mutual companies operating in the United States.⁵ The report also showed that sales of farm products and farm supplies by cooperatives amounted to \$2,100,000,000 annually, with 295 associations reporting sales of more than \$1,000,000 each, and 34 reporting sales of more than \$10,000,000 each.

In order to serve cooperative associations in their respective districts, twelve district banks for cooperatives were established under the provisions of the Farm Credit Act of 1933. To render

⁵ Of these, 10,752 were engaged in marketing farm products and purchasing farm supplies, 1,900 were mutual fire insurance companies; and approximately 2,500 were mutual irrigation companies.

services on a broad regional or national scale, the Central Bank for Cooperatives was organized in Washington, D. C. Under certain conditions, the Central Bank and a district bank may jointly participate in extending larger lines of credit.

Capital. — On December 31, 1939, the capital of the banks for cooperatives paid in by the government amounted to \$149,000,000, distributed according to the existing credit needs of the various districts. In addition, \$3,487,300 had been paid in by the borrowing associations in order to maintain the cooperative principles of the banks. Every borrowing cooperative organization becomes a member-stockholder of the bank from which it borrows. At the time a loan is made, a borrowing institution must own stock equal to \$100 for each \$10,000 desired.⁶ Upon repayment of the loan, an amount equal to the value of the stock (or of the payment into the guaranty fund) may be applied as part of the final payment, provided no impairment of the bank's capital prevents this.

Loans. — Three distinct types of loans are extended by the banks for cooperatives, namely, commodity, operating capital, and facility loans. *Commodity loans* are extended to enable cooperative associations to make advances to their members on the commodities delivered and to pay the costs of marketing such commodities. Such loans ordinarily mature in from three to nine months. The security for them is generally in the form of warehouse receipts, bills of lading, or other shipping documents. They are also extended to purchasing associations on the security of supplies held in storage. *Operating capital loans* are made for the purpose of supplementing the borrowing association's working capital and must be repaid within a period not exceeding three years. *Facility loans* are made to enable cooperatives to finance or refinance the purchase or lease of land, buildings, or other physical facilities. Under the law, such loans must be repaid within twenty years; however, in the past these loans have not exceeded a maturity of ten years. First liens on the physical properties of the borrowing cooperative are taken as security. Facility loans may not be made in excess of 60 per cent of the value of the collateral offered.

Interest rates bear a direct relationship to rates prevailing in the money market. During 1939, the following interest rates were

⁶ In some states where the law does not permit cooperatives to own stock in a bank, cooperatives pay a corresponding amount into a guaranty fund.

in effect: Commodity, $1\frac{1}{2}$ per cent; operating capital, $2\frac{1}{2}$ per cent; facility, 4 per cent. During the same year, advances totaling \$83,359,807 were made to cooperative organizations.

The Farm Credit Act limits eligibility to borrow from a bank for cooperatives to cooperatives engaged in one or more of the following activities: (1) processing, preparing for market, handling, or marketing farm products; (2) purchasing, testing, grading, processing, distributing, or furnishing farm supplies; or (3) furnishing services for farm business. Moreover, to be eligible an association cannot transact more business with nonmembers than with members. Also no member can have more than one vote in the affairs of an association and an association must limit dividend payments on capital stock or membership capital to 8 per cent per annum.

Loanable funds are derived from two sources. One is a bank's capital, including paid-in capital, surplus, undivided profits, and guaranty fund. The second source is the use made of the rediscounting privilege with the federal intermediate credit banks. The Central Bank in Washington may also issue debentures, but no such issues have been made to date.

Emergency Crop and Feed Loan Acts. — The Emergency Crop and Feed Loan Section of the Farm Credit Administration operates under the jurisdiction of the Production Credit Commissioner (see Figure 26) and extends short-term credit, in an amount not exceeding \$400 to small farmers who are unable to obtain loans from other sources. Loans are made for the purpose of financing the production and harvesting of crops, the production and purchase of feed for livestock, and the fallowing of land. All loans made are secured by a first lien on the crops financed with the proceeds of a loan or by a first lien on the livestock to be fed. During 1939, 142,643 loans aggregating \$15,191,134 were made. A recent study shows the number of borrowers who are able to obtain loans from other sources after one or two years' emergency financing is large. On the other hand, however, such a decrease in the number of borrowers is offset to a considerable degree by a large number of new borrowers who are unable to obtain loans from other agencies and thus fall back on emergency crop and feed loans. This study, no doubt, indicates that the resources of these small farmers are so limited that unfavorable changes in prices or in crops destroy their credit.

Regional Agricultural Credit Corporations. — The Emergency Relief and Construction Act of 1932 authorized the Reconstruction Finance Corporation to establish in any of the twelve farm credit districts a regional agricultural credit corporation with a paid-up capital of not less than \$3,000,000. Twelve corporations were created primarily to meet the then pressing demand for short-term credit. A 1933 executive order placed certain features of these institutions under the Farm Credit Administration. On May 1, 1934, the regional agricultural credit corporations were placed in orderly liquidation, the permanent production credit associations being then organized to take the place of the temporary "regionals." From 1932 to the end of 1939, loans amounting to \$327,989,140 were made; on December 31, 1939, only 2.4 per cent of the total amount advanced was still outstanding.

Agricultural Marketing Act revolving fund. — The Agricultural Marketing Act of 1929 set up a revolving fund of \$500,000,000 for the use of the then existing Federal Farm Board in extending loans to farmers' cooperatives and stabilization corporations, such as the grain and cotton stabilization corporations. During 1933, the board's successor, the Farm Credit Administration, was ordered to administer the remaining balance of the fund. The creation of the Central Bank for Cooperatives and the twelve district banks for cooperatives naturally curtailed the lending operations of this fund. The outstanding loans, amounting to \$87,207,043 on December 31, 1939, are now being liquidated. The Farm Credit Act of 1933, under the terms of which the Central Bank for Cooperatives and the twelve district banks for cooperatives were established, provided for the payment from this revolving fund of the capital stock of these institutions. As previously stated, \$149,000,000 was used for such purposes.

Summary. — In the preceding pages, an attempt has been made to give a brief review of the growth of agricultural financial institutions. At present, the United States is divided into twelve farm credit districts. In each district there are four permanent credit institutions located in one central office: (1) the federal land bank, making mortgage loans through the national farm loan associations, (2) the production credit corporation, supervising local production credit associations, (3) the district bank for cooperatives extending loans to farm cooperatives, and (4) the

federal intermediate credit bank, acting as a bank of discount to supply short-term funds required by production credit associations, farmer cooperatives, and other farm organizations.

In addition to these permanent institutions, the Farm Credit Administration is charged with certain emergency functions: (1) emergency crop and feed loans from funds appropriated annually by Congress, (2) the liquidation of the regional agricultural credit corporations organized in 1932 to meet the demand for short-term loans whose place is being taken by the production credit associations, (3) the extension of Land Bank Commissioner loans, (4) the liquidation of the joint stock land banks, and (5) the liquidation of the Agricultural Marketing Act revolving fund.

According to the annual report of the Farm Credit Administration for 1939, about two million farmers are using the financial facilities of the institutions discussed in this chapter. Credit outstanding on December 31, 1939, amounted to more than \$3,000,000,000, representing approximately one-third of the total credit outstanding to agriculture from all sources.

SUGGESTIONS FOR FURTHER READING

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CHAPTER XIX

BANKS FINANCE THE CONSUMER

Introduction. — In recent years, state and national commercial banks have come to engage in steadily increasing numbers in consumer instalment-credit activities. Participation of banks in the extension of credit to the consumer may be both direct and indirect. If direct, it involves making personal loans and financing consumers' purchases of durable goods on instalment terms through personal-loan departments; if indirect, it involves discounting the notes of personal- and sales-finance companies, industrial banking companies, axias,¹ and credit unions. While it is the purpose of this chapter to discuss the activities of commercial banks in the field of consumer credit, it must not be overlooked that other institutions also furnish credit more or less effectively to wage earners and salaried individuals. A large volume of loans is extended by unlicensed lenders, pawnbrokers, remedial loan societies, and particularly by retail merchants through open-book accounts. In many instances, accounts receivable are used as security for bank loans, in which case commercial banks, not merchants, furnish the funds for such credits.

Statistical data concerning consumer credit are not readily available. Should the time come when the total volume of consumer loans is as quickly ascertainable as the size of the business debt is today, it will probably be found that total consumer debt approaches figures comparable with those representing all commercial debts. A complete classification would cover: mortgages on homes, taxes handled on deferred-payment plans, amounts owed for professional services and owed to manufacturers for merchandise sold directly to consumers, amounts owed on life insurance policies under agreed premiums (assuming average life expectancy as the term of contract), in short, every agreement under which a consumer obligates himself to pay definite amounts at stipulated intervals

¹ Axias are credit agencies organized among racial groups, which combine savings and loan functions. They operate along similar lines as credit unions.

over a period agreed upon. Such items as loans against life insurance policies, against building and loan shares, and against savings pass books might also be included. These transactions are, however, in a somewhat different category, for they constitute an extension of credit on the basis of what has been called dissavings.

Definition. — The function of consumer credit is to enable individuals to enjoy an income either before earning it or receiving it. Consumer loans may conceivably be classified on the basis of use or on the basis of the agency granting such loans. Of course, neither method is very satisfactory. In the case of the former, the difficulty of distinguishing between a producer and consumer presents itself; in the latter, the fact that no one agency is purely a consumer credit agency makes classification difficult.

THE DEVELOPMENT OF CONSUMER CREDIT

The need for consumer credit. — Why is consumer credit necessary today? To say that banks in their search for opportunities to increase bank earnings consider such activities necessary, is no answer. They merely supply a service which, at this time, happens to fit into the present situation. Consumer credit was needed just as much when banking practice frowned upon such activities. Historical records inform us of the terms on which consumer credit was secured as far back as the code of laws published by Hammurabi, the founder of the Babylonian Empire. Biblical literature contains many references to the difficulties that individuals faced in obtaining financial accommodation. Both Mosaic and Roman laws prohibited the taking of interest on such loans. Aristotle's condemnation of interest was based upon the belief that interest charges are contrary to the laws of nature since money does not beget money — a concept that was effective far into the Middle Ages. This failure to perceive clearly the nature of capital is not astonishing, for loans were not made to individuals who, as a result of such accommodation, could increase their own earning power. However, the fact that interest restrictions did not apply to the financing of Roman overseas commerce or to certain agricultural activities implies that even then a distinction between producer and consumer credit was recognized.

The revival and development of commerce following the crusades

brought about a change in doctrine. The industrial revolution completely changed the fabric of social organization and emphasized the importance of the individual as a consumer. The factory system stimulated interest in the plight of the consumer for two reasons: First, the personal insecurity inherent in the industrial organization of society made the consumer a social problem; and second, large-scale production methods necessitated the creation of mass markets among the lower-income groups and this brought to light the connection between the volume of production and the volume of consumer purchasing power.

Until recently, the idea has prevailed that, although modern living is plagued by uncertainties, it is the function of the prudent individual to protect himself from such vicissitudes by his own action. No one can deny that the most effective way to meet unexpected financial drains is with savings. But available evidence shows conclusively that savings sufficient to meet unforeseen contingencies are out of the reach of the majority of families. Even in 1929, seven out of every ten families received an annual income of less than \$2,500. Families possessing an income between \$1,250 and \$2,450 saved little; those with an income of \$1,250 or less were not able to save at all.

In addition to the insecurity brought about by our present industrial organization, emergencies of daily life or extravagance may force individuals to seek financial aid. In a *laissez-faire* society, aid to individuals who had succumbed to the forces of economic insecurity was practically disregarded. But the age of the machine and power production entailed the rise of mass production and forced industry to find a way to place goods in the hands of potential consumers whose current cash holdings were too small to assure purchases in sufficient volume, or whose capacity to save was too uncertain to accumulate easily the purchase price of durable goods. Two institutions extending credit to consumers developed to meet this situation; one was planned to accommodate the consumer in case of personal emergencies; the other, to assure the mass distribution of goods.

In 1937, the Board of Governors of the Federal Reserve System finally accorded recognition to instalment credit and made it an asset eligible for rediscount by liberalizing the official interpretation of "commercial transaction." This action came after years of

struggle on the part of finance companies to have their paper declared acceptable at banking institutions. Now any credit extended to consumers for the purpose of distributing goods is a business loan and eligible for rediscount at Federal Reserve banks. Commercial banks are thus able to rediscount finance company paper at their Federal Reserve banks if they show that such credit was extended for business purposes. The usual maturity regulations also apply here; no note may exceed a term of three months from date of rediscount. Since notes of finance companies have been placed on a parity with commercial loans, bankers are less reluctant to accept such notes. In the past, they had to bear in mind that in case of emergency the bank would be unable to take finance company paper to its Federal Reserve bank for rediscount.

Direct consumer financing. — For years prior to the entry of commercial banks into the field of direct consumer financing, institutions that provided the consumer with credit facilities had proved themselves to be rather successful. Why did commercial banks stand aside for so long and permit specialized agencies to conduct this business? A number of reasons explain their action. No doubt a major reason for the marked change in the banks' recent attitude towards such loans has been the steady decline in bank earnings derived from other loans and investments. The accumulation of large excess reserves has also contributed to the increasing interest of banks in consumer instalment financing. It is easy, however, to overemphasize the pressure of special circumstances. For many years, a certain social stigma was attached to direct consumer financing. One banker, in a community of about fifty thousand people, tells of the ridicule that was heaped upon him when he first introduced "5 and 10 banking." Notions with regard to community reputation and public relations in general have prevented many a banker from changing established business practices. Since consumer financing was a new type of business, banks felt uncertain as to how much risk could be attached to such ventures.

Probably other considerations are more fundamental in the banker's attitude towards consumer financing. Small-loan banking is entirely different from the services previously performed by banks. For example:

1. The original point of view held concerning commercial

credit must be replaced by a distinct retail or consumer credit point of view. The head of a small-loan department must possess the retail credit man's understanding of people in the lower-income groups who manage to pay their debts under conditions incomprehensible to a member of higher-income group. One banker with \$300,000 in small-loans expressed himself recently in a state bankers' convention as regretting the fact that he was not losing enough money in that department. This small-loss ratio showed that too many applications for loans were turned down, including many good loans. It is one thing to look at the figures in a few statements and to decide whether the customer will be able to pay the note three months from now; it is quite another, to decide whether a wage earner with an income of \$30 per week will be able to pay twenty-four or thirty-six monthly instalments starting in thirty days.

2. Records must be complete enough to assure safe operation, but must not increase clerical expenses disproportionately. In this type of loan activity, a bank cannot afford to wait until a prospective customer asks for credit before information concerning credit is obtained. If the bank does not provide a quick service, other institutions will obtain the business.

3. A volume of small loans must be assured which is sufficient to support the higher administrative cost inherent in instalment loans in comparison to commercial loans. The relationship of volume to fixed costs can easily be understood by examining the record of a large bank which in 1937 lost \$1.27 on each personal loan of \$50, repayable in six monthly instalments, owing to a small-loan volume. The following year, a larger volume reduced this loss to 16 cents on each personal loan of this size. A further increase in volume finally brought a profit on such small transactions. Many communities in which two or more banks are located may find themselves in the position in which only one bank can obtain enough small loans to compensate for the additional costs involved. If all the eligible local institutions decide to enter this field, they will find it impossible even to make expenses.

4. Sufficient diversification in consumer credit must exist to maintain the loan volume at a profitable and reasonably steady level. The volume of small loans varies directly with prevailing seasonal and financial conditions. Lack of adequate diversification

will not only shrink the volume of loans during periods of economic retrenchment, but at times will also force the bank either to carry a considerable overhead or to dismiss its trained employees, the replacement of whom would prove a costly affair.

5. The methods employed for collecting amounts due must be efficient to avoid large losses. If a considerable number of accounts must be placed in the hands of an attorney or if numerous actions at law must be taken, the profitability of a small-loan department may be jeopardized.

6. It should also be pointed out that in many states, state banking laws did not expressly authorize banks to finance the consumer on an instalment basis at rates in excess of statutory interest rates. As long as their legal status as a financing agency for consumer needs was not clarified, banks naturally felt very hesitant to embark on such activities.

Government activities as stimulants. — In a recent questionnaire sent by the National Bureau of Economic Research² to commercial banks inquiring as to their reason for turning toward consumer instalment financing, a considerable number seemed to feel that their success in handling the original Federal Housing Administration's loans for home modernization suggested the advisability of continuing the instalment business. Many bankers originally believed that the FHA insurance of 20 per cent of the total volume of modernization loans was not sufficient protection. Yet, in 1936 when FHA insurance on modernization and equipment loans was no longer available, a number of banks desired to continue this profitable business. In many instances, construction firms were asked to guarantee loans made by banks to their customers by as much as 10 or 20 per cent. A substantial volume of modernization and equipment loans was thus created as the share of responsibility assumed by the dealer enabled the bank to embark upon a more liberal credit policy. When the Federal Housing Administration again received authorization for guaranteeing loans, equipment loans were no longer insurable. Such loans continued, however, to be made under a guarantee agreement with equipment dealers. The stimulus which government actions gave to banks must not be underrated. The FHA loans possessed practi-

² Chapman, John M. and associates, *Commercial Banks and Consumer Instalment Credit*. New York: National Bureau of Economic Research, 1940.

cally all the characteristics of personal loans and introduced many commercial banks and trust companies to this type of loan activity.

Many banks upon their own initiative have decided to offer such services. An outstanding example is the Bank of America which has done a greater volume of consumer loan business than any other institution through its widely advertised Timeplan Personal Loans, Timeplan Automobile Finance, Timeplan Home Loans, and Timeplan Equipment Loans.

Quantitative importance of consumer financing. — It is estimated ³ that at the end of 1938 there existed more than one thousand five hundred bank personal-loan departments in the United States and that the total volume of outstanding consumer loans in the form of personal loans and loans to sales finance companies was approximately \$500,000,000. Personal-loan departments are more frequently found among large banks. Thirty per cent of commercial banks having a volume of loans and investments of \$50,000,000 or over have set up such departments, while about 5 per cent of these institutions possessing a volume of loans and investments of less than \$1,000,000 have set up such departments. The region having the greatest number of banks with personal-loan departments is New England, where approximately 20 per cent of all commercial banks have established personal-loan departments.

The importance of personal loans to the operating bank is indicated by the fact that among small banks such loans constitute almost 50 per cent of all their loans. The larger the bank, the smaller is the percentage of personal to total loans. According to the aforementioned study of the National Bureau of Economic Research, gross earnings on personal loans and on loans to sales finance companies are considerably higher per \$100 of investment than gross earnings on loans and investments. Therefore, personal loans are of much greater importance to the banker as a source of gross earnings than their relationship to total loans and investment would imply.

THE COST AND VOLUME OF CONSUMER CREDIT

The cost of consumer credit. — The criticism is often heard that charges in the field of consumer financing are too high. In

³ *Ibid.*, p. 23 and p. 30.

seeking an answer to this problem, it must be remembered that the rate charged by any lender must be sufficient to cover: (1) the administrative costs of conducting a business, (2) the risk of partial nonpayment on the total volume of loans made, and (3) a charge for the use of money. Since banks do not pay any interest on demand deposits, and only a very low rate of interest on time deposits, we might say that they enjoy the benefit of free or, at least, low-cost funds, a benefit not obtained by other agencies for consumer credit operating on a dollar-for-dollar basis. Among such agencies, a dollar loaned represents either borrowed or capital funds against which a charge must be made. This explains the higher rates charged by nonbank personal-loan agencies.

Banks, in contrast to personal-finance companies which quote a monthly rate on the unpaid balance, usually deduct a rate of discount from the face value of the note at the time the money is advanced. A 6 per cent discount rate is equivalent to a 6.38 per cent interest rate added. At times, combination rates are quoted, for example, 6 per cent interest rate with a \$1 minimum charge on all loans. In states where the law permits such action, a considerable number of banks charge a fee for investigation of credit in addition to interest. A perusal of interest rates of bank personal-loan departments shows that the aggregate cost to the consumer for a loan of \$100 over a period of twelve months ranges from approximately 8 to 30 per cent.

In view of the highly competitive character of consumer finance, competition will force a reduction in rates if they can be further reduced. As stated in the preceding pages, consumer finance entails operations which greatly increase the costs of such loans when compared with other fields of finance. We may decry this high cost of consumer credit which must be repaid out of future income, but from an economic point of view, there is no reason why the capitalistic criterion of costs and profits should not be applied to consumption as well as to production credit.

The statement is frequently made that costs of consumer loans could be substantially reduced if the losses arising from overextension of credit were cut down. Recent studies do not seem to support such a statement. Losses are considerably less when credit is extended to the consumer than when credit is extended to the producer. The chief explanation of this phenomenon, so contrary to

the general impression, lies in the perpetual vigilance of the lender, which partly accounts for the apparent high cost of extending credit to the consumer.

Fluctuations in the volume of consumer credit. — Three general types of consumer credit may be distinguished:⁴ (1) *Consumers' capital financing* represents credit used by a consumer to purchase durable goods, for example, an automobile. In view of down-payment and subsequent instalment payments, any liability created under the purchase will be more than balanced by the asset simultaneously created. (2) *Consumers' deficit financing* represents credit as a result of which an individual's expenditure for consumptive purposes is expanded without an offsetting increase in his assets. (3) *Income-period financing* represents credit used to finance current expenditures between periods when an individual receives his income. Usually the proceeds of such credit extension are employed for the purchase of nondurable goods, but this type of consumer credit financing does not result in a decline in the consumer's net worth.

Nugent presents interesting charts to illustrate the susceptibility of these three types of consumer credit to cyclical fluctuations. Consumers' capital financing as well as income-period financing moves in direct response to the business cycle, whereas consumers' deficit financing moves inversely with the cycle.⁵ Consumers' capital financing has increased tremendously and is characterized by extreme fluctuations.

Income-period financing. — Up to 1934, income-period financing exceeded in volume the other two categories of consumer credit. Today its dominance has been surpassed by consumers' capital financing. Income-period financing arises more or less universally as a result of open-book credit sales. In view of the changing attitude of banks toward the purchasing of accounts receivable, banks are increasingly financing such open-book credit sales. Since accounts receivable occupy a prominent place in any financial statement, such sales often form a partial basis for the extension of bank loans to retail merchants.

Fluctuations in the outstanding volume of income-period financ-

⁴ Nugent, Rolf, *Consumer Credit and Economic Stability*. New York: Russell Sage Foundation, 1939.

⁵ *Ibid.*, p. 125.

ing result either from changes in the volume of retail sales of non-durable goods and services, from changes in the percentage of such sales on credit, or from changes in the customary period for which credit is extended. The development of this type of credit-selling was greatly stimulated by the increasing use of checking accounts and the development of industrial communities which increased greatly the number of individuals receiving regular periodic incomes. Moreover, the general increase in per capita real income of persons in certain occupational groups made them eligible for credit extension, whereas they were formerly deemed poor credit risks. Competition among merchants accelerated the phenomenal growth of income-period financing.

Nugent also brings out an interesting fact with regard to the susceptibility of this category to cyclical fluctuations. Prior to the Civil War, open-book accounts increased during periods when demand slackened and the period for which credit was usually extended was lengthened. In recent years when incomes declined, the period of credit extension was reduced and the ratio of open-book sales to total sales tended to decline.

Consumers' capital financing. — Until instalment-selling methods were employed in the sale of household durable goods, consumers' capital financing was rather negligible. With the advent of automobile financing,⁶ it became the most important aspect of consumers' financing. The extent to which banks finance automobile buying is indicated by a recent advertisement of the Bank of America which states that one out of every three automobiles sold in the state of California is financed through that institution.

The evolution of consumers' capital financing is an interesting story. Suffice it to say that certain manufacturers were quick to recognize that rather high losses on instalment sales were more than offset by the savings effected in production costs resulting from the widening of markets. For example, certain book publishers used the difference between average and marginal costs as a

⁶ Automobile financing by banks is usually effected through the dealer. This is done for two main reasons: (1) A loan direct to the retail buyer needlessly increases overhead costs as the banker under such conditions shoulders all responsibility which the dealer otherwise retains. (2) If the bank deals directly with him, the purchaser is inclined to shop for the highest trade-in allowance. Frequently the result is that the dealer makes sales on unprofitable terms, which may later affect his credit standing with the bank.

subsidy for the extension of instalment sales. Eventually competition forced fixed costs to be spread over the entire volume of output. Price competition, supplemented by competition over the degree of liberality of credit terms, greatly stimulated consumers' capital financing. This intensified competition further increased the sales of individual products and this, in time, brought lower costs and selling prices, thereby facilitating an additional expansion of sales. Even industries of a type that made instalment selling inadvisable, were forced to resort to it in self-defense.

The sharp decline in consumers' capital financing in the years following 1929 was, of course, brought about by a curtailed sales volume of durable goods, but it should be noted that the decline of sales volume can never be an indicator of the rate of consumption. During recessions, individuals merely consume utilities which have been accumulated during better times. The process of consumption is not only an economic but also a psychological phenomenon. Many estimates made with regard to the life of durable goods and their replacement seem to underestimate the importance of the fact that a postponement of replacement does not represent a renunciation of all use satisfaction, but only a giving up of the greater satisfaction which might result from the use of a new durable good.

At least one other important factor has greatly influenced the susceptibility of consumers' capital financing to cyclical movements. As long as virgin fields for this type of consumer credit could be found, periods of depression have usually brought about its extension, and thus have served as an economic shock absorber. By 1937, "the frontier for consumers' capital financing was virtually exhausted and the full impact of the cyclical movement was felt probably for the first time."⁷ Needless to say, any changes made in the credit terms upon which consumer credit is extended exercise a powerful influence upon the volume and trend of consumers' capital financing.

Consumers' deficit financing. — Consumers' deficit financing is the oldest type of consumer credit. Whether such financing arises from what the reformer might term extravagance on the part of the wage earner or from unforeseen increases in his personal expenditures does not interest us here. We must recognize that a great volume of

⁷ Nugent, Rolf, *op. cit.*, p. 136.

deficit financing exists that is subject to secular and cyclical growth. During depression periods, this type of consumer credit has tended to increase; during periods of prosperity, it has tended to decrease. Many institutional factors contributed to its long-term growth. Steadily increasing urbanization eliminated established facilities for mutual assistance among neighbors and family members. The disappearance of the moral connotation of the word "thrift" and a general increase in income-period and capital financing likewise made their contributions. The personal insecurity inherent in our industrialized society was, of course, the most important factor.

In the past, the volume of consumers' deficit financing has been immediately affected adversely by periods of economic retrenchment.⁸ If no immediate income was in sight, sluggish accounts receivable were not accumulated by merchants beyond a certain point. Neither could the specialized cash-lending agencies give assistance to unemployed persons. The rise of social security measures of one type or another has, no doubt, modified the susceptibility of consumers' deficit financing to cyclical fluctuations. The fact that this category of consumer credit played a relatively minor part in the phenomenal expansion of all consumer credit during the 1920's would seem to disprove, at least partly, the accusations hurled from many sources at the consumer, that living beyond his means had constituted an important cause of the recent depression.

Summary. — Bank credit today reaches the consumer in a number of more or less direct ways. An increased volume of accounts receivable tends to increase the volume of bank loans to customers. The better credit risks have always been accommodated by banks through extension of loans and the establishment of bank personal-loan departments has facilitated the granting of loans to the lower-income groups. In addition, banks are now buying commercial paper secured by retail or other instalment contracts. It has been estimated that approximately two-fifths of the total volume of consumer credit originated directly or indirectly

⁸ A recent study by Duncan McC. Holthausen, *The Volume of Consumer Instalment Credit, 1929-1938* (New York: The National Bureau of Economic Research, 1940) does, however, point to the fact that the volume of personal loans made by cash lending institutions has surprisingly resisted the trend of business activity during depression periods. At present, it shows even more rapid rate of growth than business transacted by the retail instalment credit outlets. Of course, not all these loans can be classified under consumers' deficit financing.

with commercial banks. The important part that bank credit has played in this respect has also contributed to the cyclical fluctuations of consumer credit. Availability of bank credit brings about a liberalization of credit policies during periods of prosperity; at the first signs of a pending business recession, an opposite trend develops.

FINANCING THE FINANCE COMPANIES

Financing instalment credit agencies. — Table 30 indicates the extent to which commercial banks engage in indirect financing of the consumer.

TABLE 30. SOURCES OF FUNDS OF FOUR TYPES OF
CONSUMER CREDIT AGENCIES, 1937

(In per cent of total assets)

<i>Sources of funds</i>	<i>48 Sales finance companies</i>	<i>20 Personal finance companies</i>	<i>69 Industrial banking companies</i>	<i>2,248 Credit unions</i>
Borrowings.....	69.0	35.3	83.4	2.3
Short-term debt.....	53.8	29.3	0.9	2.3
Deposits.....			82.5	
Funded debt.....	15.2	6.0		
Equity account.....	20.1	48.5	10.1	95.4
Preferred stock.....	3.3	15.5		
Common stock and sur- plus.....	16.8	33.0	10.1	95.4
Total assets (in millions) ..	\$1,811	\$226	\$175	\$19

Source: Chapman, John M., *op. cit.*, p. 194.

Sales-finance companies. — Sales-finance companies purchased during 1939 approximately \$2,000,000,000 worth of retail instalment paper arising from the sale to consumers of automobiles, household appliances, radios, and other merchandise. At the end of 1939, bank holdings of this class of paper totaled \$541,243,000. It is therefore clear that bank credit is important to sales-finance companies. The relationship between commercial banks and specialized consumer credit agencies is also interesting because the former compete directly with the latter in the instalment credit market. In many banks the recent decline of loans to consumer credit agencies was much more pronounced than the decline of their total loans.

Sales-finance companies are ordinary business corporations whose function it is to finance sales. This is done either (1) by the purchase of instalment notes created by the sale of approved products to individuals or (2) by the extension of cash advances to dealers on the security of their floor stock. The three leading national organizations in this business handle on the average approximately \$4,000,000,000 worth of wholesale and retail paper per year. The volume of these transactions naturally varies with fluctuations in industrial employment. Some of the leading finance companies are either subsidiaries of commercial banks or subsidiaries of large automobile manufacturers and rely heavily on bank accommodation. Independent finance companies, at times, place accounts receivable in trust with a trust institution, issuing against them short-term collateral trust certificates or long-term collateral trust bonds. These are sold to investors, frequently to banks, and as receivables mature, substitutions of equal value are made.

Any sales-finance company desiring accommodation at a commercial bank arranges for a line of credit, which is usually considerably in excess of anticipated maximum needs. The trend, similar to other bank-loan activities, has been from secured to unsecured loans. It is true, however, that in case of loans to small sales-finance companies banks still demand collateral. The maturity of such loans ranges from payable at sight to payable in twenty-four or more months. Interest rates usually range from 1 to 5.5 per cent, the most common rate being 1.5 per cent. National sales-finance companies are also in a position to receive better rates than state or regional companies. During the 1920's, banks financed a considerable number of sales-finance companies through the purchase of their paper in the money market. The rapid development of direct lending has, however, checked the use of open market facilities.

The procedure which a bank credit department uses in evaluating the credit standing of a particular sales-finance company differs radically from that used in connection with ordinary commercial loans. It is a comparatively easy matter to evaluate physical assets such as merchandise inventory, real estate, or equipment, but to ascertain the quality of notes or receivables representing many individual transactions is a large task. Moreover, a thorough investigation of a company's operating policy is essential, since the

quality of the portfolio is conditioned by it. The analysis of balance-sheet ratios is distinctly a secondary step in this connection.

The following criteria are used to differentiate between good and bad credit risks: (1) A company's past record of repossessions or delinquencies permits definite conclusions with regard to the credit-rating of its customers. (2) The customer's original equity in the product financed must comply with a certain minimum standard. (3) The average length of notes must not be excessive, in order not to be vulnerable to temporary stoppages or reductions in the maker's income. (4) A sales-finance company should be in a reasonably liquid position, that is, a company should be able to liquidate within from six to eight months.

Personal finance companies. — Personal finance companies operate under the authority of special small-loan legislation, sponsored originally by the Russell Sage Foundation in order to satisfy the wage earner's demand for small loans in a legitimate way and at a reasonable cost.⁹ Chain operation, which accounts for about half of the total volume of loans made by such institutions, is characteristic of this type of consumer credit. Before 1930, little capital was obtained through borrowing at banks, but the situation has substantially changed within the last few years.

The maturities of bank loans to personal-finance companies are generally shorter than those of loans made to sales-finance companies. Interest rates on personal-finance company paper are also higher than the rates granted to sales-finance companies. This insistence upon shorter maturities and higher rates as prerequisites for such bank loans is merely a reflection of the increased risk involved in this type of consumer credit. The belief of bankers that a higher risk is assumed is also shown by the higher standards required concerning the ratio of borrowed funds to net worth. Banks generally regard a ratio of 2 : 1, or higher, as conservative among sales-finance companies. For personal-finance companies, banks advocate a ratio of 1 : 1, or better.

The 4,036 offices and agencies of personal-finance companies extended loans to the amount of \$757,300,000 during 1939. At the end of that year, \$409,700,000 were outstanding. Approximately

⁹ A uniform small-loan act, first drafted in 1916 under the sponsorship of the Russell Sage Foundation and now in its seventh redraft, is the present pattern for thirty-one states.

forty per cent of the volume of loans represents the refinancing of balances due on previous loans.

Industrial banking companies. — Despite their name, industrial banks are in reality consumer credit agencies whose business is comparable in the main to that of personal-loan departments of commercial banks. Originally they emphasized the comaker type of loan, but now they extend both secured and unsecured loans with or without comakers and have even branched out into time-sales financing. The best-known group of such institutions operates under the name "Morris Plan." The individual Morris Plan banks are locally owned and managed. The Morris Plan Corporation of America grants by contract the use of its trade name to any local bank from which it receives a small percentage of its stock in payment. The legal basis upon which the local banks operate differs considerably in the various states. In some states, they operate under the provisions of the general banking laws; in others, they are organized under special legislation; in still others, incorporation is granted under the existing business statutes. At times, they are affiliated through a holding company with commercial banks. Industrial banks are also eligible for membership in the Federal Reserve System since 1933.

Industrial banks obtain their working funds largely from time and demand deposits and from the sale of instalment investment certificates. The amount of loans granted to them by commercial banks is small and when loans are made, they are for a short period only.

ECONOMIC ASPECTS OF CONSUMER CREDIT

Consumer credit and its relation to the national economy. — In the preceding pages the various types of consumer finance in which commercial banks engage, their quantitative importance to the banks as well as to the business structure in general, and their susceptibility to secular trends and cyclical fluctuations have been presented. The topic that will occupy us in the remainder of this chapter is the relationship of consumer credit to the problem of maintaining and increasing the stream of national income.

The relationship of consumer credit fluctuations to production. — The answer to any question concerning the unique relationship between the volume of consumer credit and the volume of production, will

depend upon certain underlying assumptions. If a complete utilization of all the factors of production is assumed, an increased demand for consumer goods, as a result of expanded retail credit, would tend to increase the prices of those goods. Rising prices would entail higher profits, inducing an expansion of the consumers' goods industries. The expansion in this industry would be at the expense of a corresponding reduction in the output of capital-goods necessary to permit transfers of labor and capital to the consumer goods industries. A decline in the volume of consumer financing would have the opposite effect. If an expansion of consumer credit is effected by means of bank credit, the situation is somewhat more complicated. Changes in the general price level will occur, but they will not materially alter the analysis. Under conditions of expanding consumer credit, the prices of consumers' goods will tend to rise more rapidly than those of capital goods. This disproportionate rise in the prices of consumers' goods will induce the same transfers of productive factors as will a reciprocal price decline in capital goods.¹⁰

Both classicists and neoclassicists always assumed the existence of composite demand and supply schedules which would reciprocally and automatically equalize purchasing power and production. If the doctrine of equality of purchasing power and output is accepted, such statements as the one following, contained in Adam Smith's *The Wealth of Nations*, are logical: ¹¹ "That portion of his revenue which a rich man annually spends, is in most cases consumed by idle guests and menial servants, who leave nothing behind them in return for their consumption." Until recent times, writers on economic subjects have adhered to this doctrine which probably

¹⁰ The above-mentioned analysis is not universally accepted as the controversy between Professors Hayek and Hansen indicates. Prof. Hansen feels that, assuming an elastic supply of money and bank credit, Prof. Hayek's conclusion is invalid:

If the prices of consumers' goods rise in consequence of the payment of more money to consumers, the *prospective* rate of profit on output in all the various stages of production will rise. Entrepreneurs will apply to the banks for credit in order to take advantage of the promising prospects. The expanding volume of producer credit will forestall the shift of non-specific goods from the higher stages to the lower stages of production, as Hayek has it. The effort of consumers, in consequence of their increased money incomes, to shift production from goods of the higher order to goods of the lower order will be frustrated by the producers who, tempted by the prospective rate of profit, will at once arm themselves with more money purchasing power. (Hansen, Alvin H., *Full Recovery or Stagnation?* pp. 72-73. New York: W. W. Norton & Company, 1938.)

¹¹ Smith, Adam, *The Wealth of Nations*, Book 2, Chapter III.

accounts for the social stigma attached to consumer credit extension by business communities and the general public. Statistics seem, however, to point to the conclusion that the amount of capital formation was at its maximum when the expansion of consumer credit was highest; when consumer credit decreased, the volume of capital formation also decreased. As long as a country does not exhibit a condition of full employment, the classical theory affords an inadequate explanation of the consequences of consumer credit expansion.

If an incomplete utilization of production factors is taken for granted, our analysis proceeds along fundamentally different lines. If, at any given time, idle money is injected into the income stream, a multiple expansion of demand occurs. The immediate response is an increase in income of others about equal to the increase in demand. But subsequent income recipients also may use this original increase in income to expand their purchases of consumers' goods. The magnitude of such multiple-demand expansion depends, of course, upon the marginal rate of spending. As long as the available factors of production are not completely utilized and properly distributed, an increase in demand expresses itself primarily in a rise in the total national income.

An expansion of consumer credit under these conditions represents a stimulating addition to the stream of national income; a repayment of consumer credit has the opposite effect. The important point is that any addition to income funds augments entrepreneurial receipts without simultaneously increasing expenses chargeable to costs of production. Assuming an incomplete utilization of the factors of production, any increase in receipts of entrepreneurs results most probably in a reduction of inventories and in a consequent stimulus to production to restore such inventories to previous levels. As the initial income increment is expended or invested by subsequent recipients, both future incomes and production will be increased at the accelerated rate. The degree of multiple expansion of effective demand as a result of an expansion of consumer credit will depend primarily on the reaction of producers' investment to increases in incomes. Assuming a small volume of idle productive factors, any substantial expansion of consumer credit will create a demand for productive equipment, encouraging large-scale investment. Assuming a relatively small

volume of savings in excess of investment possibilities, an expansion of consumer credit will tend to absorb additional savings which may accrue as a result of increased incomes and thus bring about a cumulative expansion of incomes. A contraction in the volume of consumer credit will have, of course, the opposite effect upon incomes. It is to be remembered, however, that in the foregoing material the secular contributions to income are being discussed. In the cycle, these credits seem to have increased the range of fluctuations.

Needless to say, available data are qualitatively and quantitatively insufficient to provide a satisfactory verification of the theory of multiple expansion. Professor J. M. Clark says in this connection:

But the problem of secondary effects is almost entirely a matter of conjecture and deductive theorizing. One basic reason for believing that secondary effects exist is the fact that business cycles exist, since the way in which the business cycle gathers momentum in its swing seems to afford fairly convincing evidence that an original expansion or contraction of expenditures has produced secondary effects returning on itself time after time and multiplying its own effects in the process.¹²

Consumer credit as a determinant of national economic policy. — Classical theories, conditioned by their frame of reference, described the automatic economic forces working toward economic stability. Excessive savings were expected to discourage further saving and encourage investment through a decline in the interest rate; insufficient savings were expected to have the opposite effect. Similarly, under the classical assumption of complete flexibility of prices, changes in nominal incomes would occur without changes in real incomes, thus maintaining an equilibrium between the stream of the national money income and the value of goods produced.

While it is true that such automatic stabilizing forces still influence business cycles, they cannot be relied upon to terminate a decline of incomes as recent experience conclusively shows. In recognition of this fact, measures of social control have been introduced to assure economic stability. On the one hand, central bank policies have been devised to influence interest rates and the supply of money available. On the other hand, deficit financing by the government has been undertaken in large volume to terminate the

¹² Clark, John Maurice, *Economics of Planning Public Works*, p. 83. Washington, D. C.: Federal Emergency Administration of Public Works, 1935.

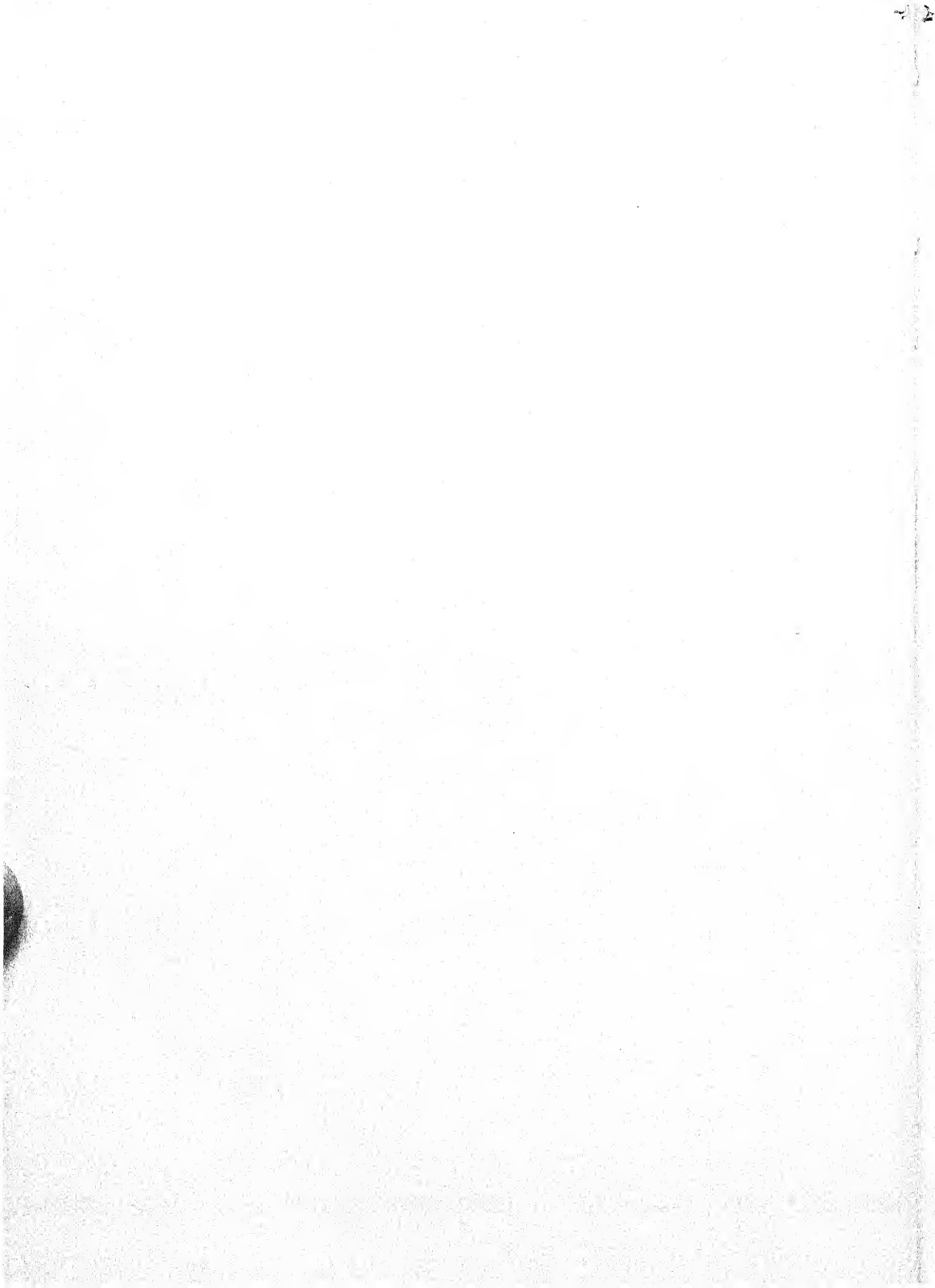
downward trend of the business cycle. While public deficit spending may be effective in increasing the national income, it nevertheless has its limitations and may engender new economic problems by its use.

In view of the steadily increasing importance which consumers' durable goods play in determining the total volume of production, the importance of consumers' capital financing will increase simultaneously. Hence, one factor which contributes heavily to cyclical movements, gains in its influence on the national economy. If economic stability is to be maintained, fluctuations in consumer credit must be controlled. Due to the radically different nature of consumer credit as contrasted with producer credit, new control methods must be devised. Supervision and regulation of down-payments and amortization periods constitute important means of control. An effective control of the extension of consumer credit would also tend to reduce public deficit spending to overcome cyclical deflations. The policy to be adopted would naturally depend upon the particular phase of the cycle in existence at a given time. In contrast to monetary and banking controls, changes in the amount of down-payments and in the amortization period seem to exercise a rather direct influence upon demand and hence upon incomes.

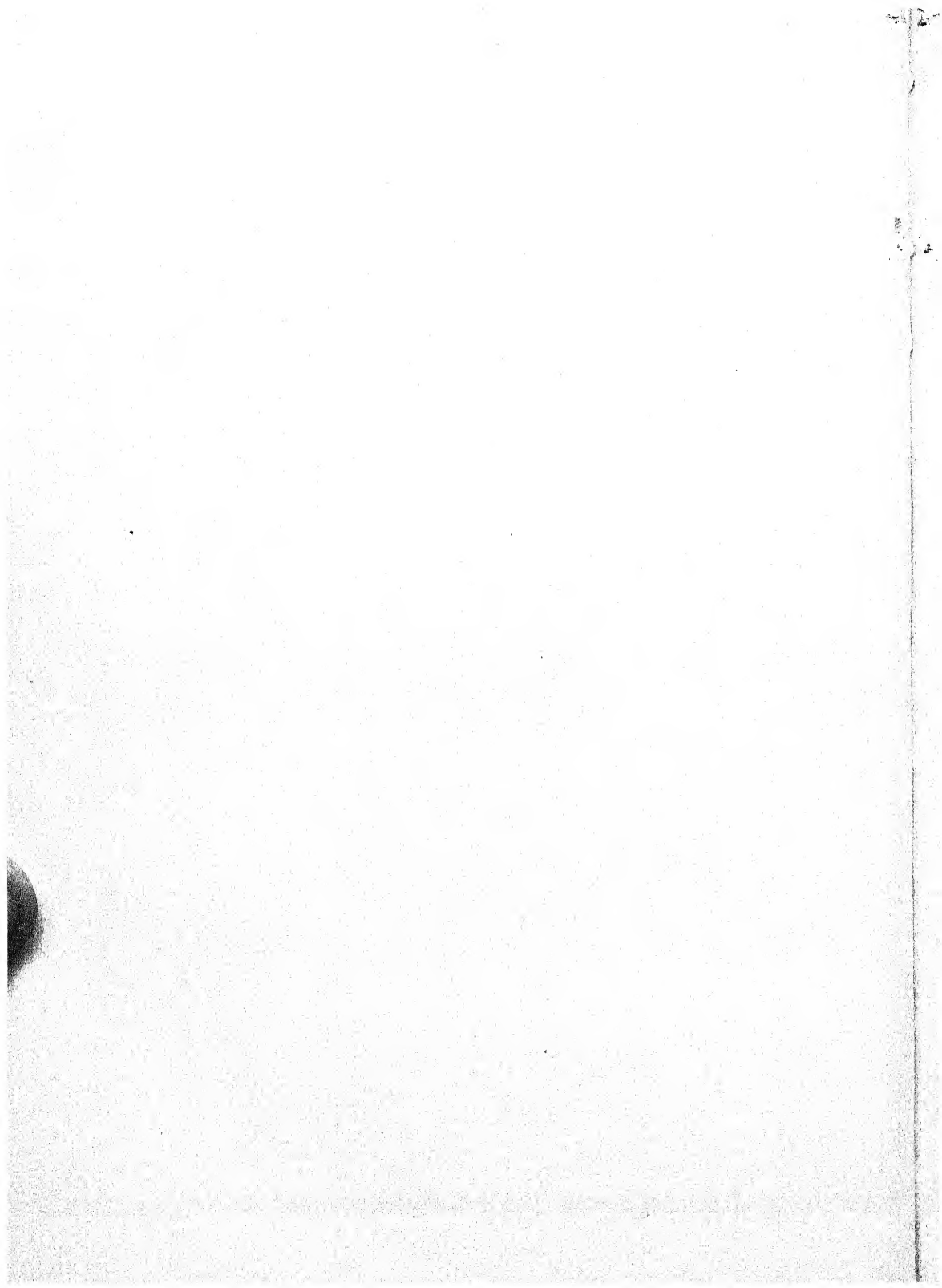
It appears to be a safe prediction to state that the Federal Reserve System will acquire an increasing control over the financing of the consumers for which, after all, banks are the principal and ultimate source of credit. Few changes are needed to restrict bank portfolios to consumer credit paper which would be eligible for rediscount when down-payment and amortization standards (established by the Board of Governors of the Federal Reserve System) have been observed. Such a development seems to be foreshadowed in a recent statement made by an assistant director of research and statistics of the Federal Reserve System. After commenting upon the growing popularity of consumer loans with commercial banks, he continued: "The broad expansion that has occurred in the past two decades in the volume of consumer credit means that there is a growing area of the credit structure that is less amenable to Federal Reserve policies. . . ."

SUGGESTIONS FOR FURTHER READING

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PART FIVE
THE VALUE OF MONEY



CHAPTER XX

THE VALUE OF MONEY: ITS SIGNIFICANCE AND ITS MEASUREMENT

Introduction. — It is not necessary to emphasize the importance of the value of money to those who have experienced the drastic price changes that have occurred since the beginning of the depression in 1929. At the low points of 1932, the level of general commodity prices had fallen 40 per cent, the prices of farm products 60 per cent, and common stock prices had reached a level 85 per cent below their 1929 highs. The distress, the failure of financial institutions, and the demands for social reform which have accompanied these events are already familiar. One might well ask why the value of money should occupy a place of such central importance in our lives. It will be the task of the next four chapters to show what makes money so prominent in our economy.

Changes in the value of money affect almost everything we do, both as private individuals and as participants in a productive system. Whether we buy or sell, save or spend, in a society in which the production of goods is so highly subdivided, money is interposed between each of our economic acts and the preceding and succeeding acts. Since money occupies this strategic position in the exchange of goods and services, it is obviously important that it should not have changes in value which are unrelated to its purpose as a medium of exchange.

Prices and price levels. — In general, the idea of value is already familiar; we state it when we say that a pound of steak costs as much as two loaves of bread or a dozen eggs. Our comparisons are more often made through the use of money as a standard of value since we say that a pound of steak costs 20 cents, a dozen eggs 20 cents, and a loaf of bread 10 cents. In making such a comparison at any given time, we do not encounter the possibility that changes in the value of money might have caused the differences in the levels of these prices; therefore, the value of money does not enter into our consideration. If later we should find the price of bread to

be 10 cents, of steak to be 15 cents, and of eggs to be 12 cents, then we might question whether the changes had been due to decreases in the costs of producing the items or whether the whole level of prices was lower. It is precisely this kind of situation which a theory of the value of money seeks to identify and explain.

Since the value of an individual commodity is determined by comparing its price with the prices of other items, the same technique may be applied in arriving at the value of money. The value of an individual commodity or of money is its power to command other goods in exchange. The process of comparing commodity prices is facilitated by the fact that these prices are expressed in terms of money, but this method is not available to us when we attempt a valuation of money, for it is impossible to express the value of money in terms of itself. This difficulty is removed by comparing the value of money with the values of all other goods. There is, however, no economic entity known as "all other goods," and so an attempt is made to create it by an average of a number of prices. Such an average must be used because individual goods rise or fall in price in response to changes in their costs of production and changes in the demand for them, or because of the particular market conditions under which they are exchanged. But if certain goods are falling in price as a result of lower costs of production, funds will be released that may be used to buy other goods, thereby raising their prices. Therefore, it is assumed that, unless changes occur in the value of money, changes in the prices of individual goods will be compensatory, and will neither lower nor raise the general level of price. After examining further the reasons for the importance of these changes, the methods by which these averages are computed will be considered.

THE SIGNIFICANCE OF THE VALUE OF MONEY

The value of money is significant for two reasons: first, variations in money value are one of the most pervasively disruptive forces in modern economic life; and second, theories concerning the causes of these variations are the bases of much of the social control applied throughout the world today. If we are to understand why certain moves are made by governments or central banks, the theories upon which their actions are based must be understood and appre-

ciated. Let us consider first the manner in which changes in the value of money operate to disturb the processes of production and distribution.

Differentials in commodity price movements. — All prices are not equally affected by changes in the value of money. Some prices, such as public utility and railway rates, are set by legal action and require long periods of time for adjustment to new levels of prices. This is caused partly by the resistance of public utility commissions to higher rates during a period of rising prices and partly by resistance of public utility managements to lower rates during a period of falling prices. In any event, during a period of rising prices, the costs of providing these services rise more rapidly than the prices at which they are sold; the reverse occurs during a period of falling prices. This illustration is significant in demonstrating a somewhat fortuitous element in the distribution of income, an element which is not strictly related to the productivity of the industry concerned. It will be seen in other relationships between groups, which are discussed below, that this same undesirable element is the central difficulty in all the problems of differential price changes.

Price changes are also a disturbing element in the relationship of debtors and creditors. A debtor is required to pay in interest and principal a certain number of dollars. If a fall in prices occurs, the dollars given in payment of the debt will buy more goods than those which were borrowed, for the purchasing power of money has increased as the level of prices has fallen. To a degree determined by the size of the debt structure of the country, the time at which it matures, and the extent of the price changes that are occurring, the real command over goods is shifted from one economic group to another purely as a result of changes that were not accurately predicted at the time that the original debt contracts were made. A few attempts at a solution of this problem have been made by stating in the debt contract that the debt shall be increased or diminished as changes in the level of prices occur.

A classification of prices into competitive and noncompetitive groups reveals still another type of group relationship which is disturbed by price changes. In the former group we may include agricultural and some mineral prices (although the government is attempting to alter this condition), while in the latter class many

forms of manufacturing and the utility groups, already referred to, may be included. Falling prices cause greater than proportionate reductions in the level of competitively priced goods, with the result that the selling prices of these goods may fall below the level of their costs of production. The rigidity of such costs is in part explained by the rigidity of the prices of manufactured goods, some of which are used in the production of competitively priced goods. Caution must be exercised in interpreting disparities in price, however, for many of the disparities which exist in our price structure unquestionably arise for other reasons than that price levels have changed.

The degree to which falling prices between 1929 and 1933 affected various industries may be seen in the data presented in Table 31.

TABLE 31. DECLINE IN PRICES AND IN PRODUCTION
(1929 to Spring of 1933)

<i>Industry</i>	<i>Per cent drop in wholesale prices</i>	<i>Per cent drop in production</i>
Agricultural implements.....	15	80
Motor vehicles.....	16	80
Cement.....	18	65
Iron and steel.....	20	83
Auto tires.....	33	70
Textile products.....	45	30
Food products.....	49	14
Leather.....	50	20
Petroleum.....	56	20
Agricultural commodities.....	63	6

Source: *Industrial Prices and Their Relative Inflexibility*, Seventy-fourth Congress, 1st Session, Document No. 13.

Social waste in price changes. — In addition to the obvious injustice inherent in the changes already outlined, two types of social waste may properly be attributed to variations in the level of prices: First, there is the waste involved in attempts to predict the future level of prices and in attempts to benefit from these predictions. It is easy to see why such waste is necessary as long as prices change so rapidly and so widely. One large company which manufactures rubber tires and equipment was forced to absorb inventory losses equal to more than \$5 per common share at the end of 1937. While a part of this

loss might already have been compensated by inventory profits during the preceding price advance, such changes force the businessman to shift at least a part of his interest from problems of efficiency to problems of forecasting the future level of prices. Society loses by this shift. To some extent, the success of a business may be determined by the success or failure of these forecasts rather than by the productive efficiency of the firm. It is reasonable to suppose that firms whose production costs are well below the margin are forced out of business before marginal or submarginal firms are, as a result of their failure to appraise correctly the trend in prices. The advantages of low costs of production may have been dissipated in inventory and credit losses.

The second type of social waste attributable to price changes is seen in the extent to which the volume of idle industrial equipment and man power multiplies during periods of falling prices. The following data compiled by Thorp and Mitchell provide a general measure of this phenomenon:

TABLE 32. PRICE CHANGES AND BUSINESS CYCLES
(United States, 1790-1920)

<i>Period</i>	<i>Price change</i>	<i>Years of prosperity per year of depression</i>
1790-1815.....	Prices rising	2.6
1815-1849.....	Prices falling	0.8
1849-1865.....	Prices rising	2.9
1865-1896.....	Prices falling	0.9
1896-1920.....	Prices rising	3.1

Source: Thorp, W. L. and Mitchell, W. C., *Business Annals*, p. 66. New York: National Bureau of Economic Research, 1926.

Falling prices so completely disorganize the customary relationship between costs, wages, and selling prices that it becomes increasingly difficult to make profits, the volume of idle equipment increases, and businesses fail. The longer the time required for the processing of the goods, the greater is the likelihood that the selling price will not cover costs. On the other hand, when prices are rising, contractual costs do not rise as rapidly as selling prices and the longer productive processes, by causing inventories to be held for a period of time, swell the volume of windfall profits.

Price changes as data in business decisions. — Somewhat more subtle, but equally as real as the other situations which make price changes important, is the manner in which they form a part of the basis upon which modern bargaining occurs. The fact that these price changes are known to have occurred in the past and to be occurring continuously causes them to become a part of the fabric of the bargaining process and thereby to obscure in part more socially desirable data. The manner in which this effect is produced may be illustrated by assuming a company to be bargaining with its labor over a wage scale for the ensuing year. The bargainers for the company may agree to wage advances which they feel are not justified on the basis of prevailing productivity and the structure of other costs. But if it seems likely that a rising level of prices will permit these higher costs to be passed on to the public in the form of higher prices for the product, they may be granted. Such wage increases are not based upon improvements in the productive efficiency of labor and, if the price advance does not materialize, they may be an economic maladjustment of importance. Similarly, if the trend of prices is downward, the company may attempt to force wage concessions from the laborers that are not justified if the price decline does not continue.

THE VALUE OF MONEY AND SOCIAL CONTROL

In comparatively recent years, a new set of circumstances has increased the importance of a varying money value, for some theory or theories concerning the causes of these changes underlie many of our modern attempts to create desired social and economic conditions by manipulation of money and credit. Since the beginning of the twentieth century, and to a greatly increased degree in the third decade of this century, the governments of most of the leading countries of the world have attempted to obtain for their people a higher degree of economic security, a higher level of economic welfare, and certain real or imaginary international competitive advantages through control of money. In order to be able to understand the logic back of these controls, it is necessary to understand the theory of money value upon which they are based; for all of them have a foundation in monetary theory, whether the theory itself is tenable or not. In fact, the emphasis

today is so greatly upon the importance of understanding the reasoning back of government controls that one business forecaster, whose predictions are widely used, bases his appraisal of the business outlook largely upon the action which the government is expected to take in handling situations as they arise. Further proof that this process of understanding monetary theory is no matter of mere academic interest may be observed by the manner in which the security and commodity markets of the world have fluctuated in the past five years, partly as a result of their attempts to adjust their values to the money plans of the governments of the world.

Since a large number of modern business decisions are based upon assumptions concerning the future level of prices for commodities, securities, and labor, and since governments are attempting to control these levels, it is necessary to be able to determine the probable effects of such controls. If a given public policy is ill-founded so far as monetary theory is concerned, then its failure can be predicted with reasonable accuracy. Contrariwise, if the policy is based upon a theory which appears to be logical, then we can adjust ourselves to the policy in the expectation that the desired results will follow.

MEASUREMENT OF THE VALUE OF MONEY

It has already been shown that the problem of measuring changes in the value of money develops from the varied responses of prices to changes in this value. If all prices could be assumed to be equally affected, it would be possible to select any given price and use it as a measure of price changes. It is apparent that the price changes of individual goods are not related exclusively to changes in the value of money, but may have elements peculiar to their conditions of production which cause variations not common to other goods. Despite this obvious difficulty, the earliest attempts at measurement consisted of the selection of a certain standard commodity, such as wheat, and the observation of changes in its price. Changes in the price of the standard commodity were then assumed to be typical of the changes occurring in the entire price system.

In the past fifty years, the index number has developed rapidly as a method of helping to resolve the difficulties which are presented in a price system that has a tendency to fan out into a variety of

price changes from one period to the next. Since the value of money is its power to command goods in exchange, the problem of measuring the value of money lies in summarizing this diffuse situation into a single expression of increase or decrease. If we should follow the procedure that is implied in this definition, we would add the prices at which all sales of goods and services occurred during a given period of time and compare it with an aggregate which was similarly determined for a second period. The difference between the resulting totals would provide a measure of the price change which took place during the interval, provided the same aggregate of physical goods were used in both instances. This procedure is impossible since we lack the necessary comprehensive information. The sales of staple commodities, such as wheat, cotton, corn, oats, rye, barley, steel, copper, lead, and many others, are reliably reported from the central markets where they are bought and sold, but data are lacking on the vast volume of retail sales as well as on the purchase of services. Because of this deficiency, the procedure followed has been to use only those prices that have been made available by the central markets. Since these prices are probably more competitive and certainly subject to wider variations than retail prices, it is likely that this method overstates the degree to which prices change. It is also true that this method recognizes no basis of selection other than that of expediency. There are two other available methods for selecting prices to be averaged which do recognize some fundamental theory of economic organization and which attempt to embody it in the construction of indexes for measuring changes in the general level of prices. We may approach these methods by asking ourselves the question: Are some prices more important in the price system, not because of the volume of the product which is produced, but because they are the basis of other prices? Two answers have been given to this question.

The first answer is founded upon the theory of general economic value. It will be remembered that, in this theory, the value of goods is determined by costs of production on the one hand and demand for the products on the other. From the values thus determined, the values of the factors of production that are used in their construction are derived. The way that this theory aids in selecting the prices to be used in an index is illustrated in Figure 28.

Each of the stages may be represented by an industry which buys materials and capital goods, hires labor, and manufactures a product, which is sold to the succeeding stage at a price that covers costs and normal profits. The differential between each of the stages represents the "value added by the process of manufacture." Stage G indicates the point at which the goods are sold to the final consumer. Goods at this stage must sell for a price which is sufficient to cover all the preceding costs that have been incurred in the manufacturing process.

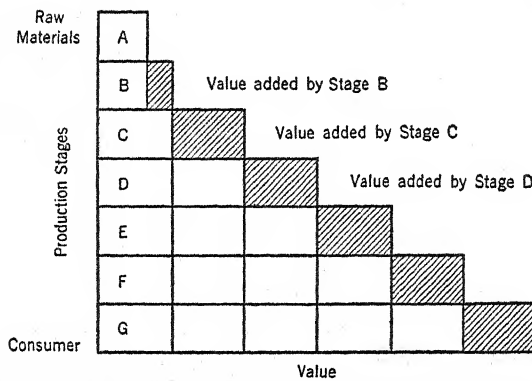


FIG. 28. THE ORGANIZATION OF ECONOMIC VALUES ACCORDING TO COST THEORY

If economic values should always maintain a consistent pattern in which each of the parts is properly joined to the preceding and succeeding processes, a selection of prices to be included in an index might be made entirely from the goods that are available for use by consumers. Changes in the resulting index would then reflect a corresponding change in the character of our diagram; it would expand and contract with the level of consumer prices. Such a selection would have the further advantage that it stresses the consumption price level and thereby permits a close appraisal of the most important changes from the standpoint of consumer-purchasing power. Such price elements as wages, capital goods, and real estate values have been omitted on the assumption that the changes which occur in these and other elements not included will be reflected in consumer prices; if they should not, then they will be considered of no significance.

Without denying the validity of the value theory upon which this

formulation is based, we may question whether such a consistent system of values generally prevails sufficiently long to justify the assumption that it exists continuously. During periods when business is advancing in volume the margins between each of the stages probably widen, as consumers take goods more willingly; while in periods of declining business activity, goods frequently must be sold at prices lower than their cost of production, if they are salable at all. If these periods of advancing and declining business disrupt this price pattern, it is likely that such a price selection would overemphasize the importance of consumer expenditures and fail adequately to represent those commodities which are in raw and semifinished condition.

The second type of logical selection of prices for an index bases its procedure upon the assumed weaknesses of the former method; it stresses the incongruities which are likely to form in the price pattern as a result of business and technological trends. Furthermore, it implies that monopolistic and other elements of control make such a scheme of economic values excessively simple. From these criticisms, the procedure is developed to give representation to each of the stages rather than to expect all of these values to be represented properly in the final prices of consumers' goods. The contrast between these two methods is afforded by reference to Figure 28; the first method employs only the final stage in the value triangle, while the second attempts to recognize and value properly the entire area. With reference to this method, it should be made clear that by taking prices from each of the stages, it is possible that one commodity may be emphasized too much in the final index. In fact, this will probably happen to all those goods which must first be passed through many processes before being sold to the consumer; the goods which require little preparation before being sold will have less chance of being adequately represented.

The importance of the distinction which has been drawn between these two conceptions of the organization of economic values will become clearer after a discussion of the velocity of money, which will be presented in Chapter XXI. At this point, it is sufficient to indicate that the theory of measuring changes in price levels by the use of the consumers' goods prices has become more popular in monetary theory during recent years, although the published indexes have not as yet been changed, nor have the central banks

given any sign that they have shifted their interest from the older indexes.

In summary, there are three ways in which we may select the prices to be represented in an index, the purpose of which is to measure changes in the value of money; (1) a sample without reference to the relative importance of the commodities selected, (2) a selection of consumer prices, (3) a sample of prices from each of the productive stages into which industry is organized.

Method of computing an index. — Once a decision has been made concerning the prices that are to be included in the index, two other problems remain: (1) How shall the prices be combined into one single expression of change, and (2) how shall the relative importance of the items be determined? The latter, usually referred to as the problem of weighting, is frequently resolved by giving each commodity a weight which is determined by the amount produced or consumed in a given year. On other occasions, weights are assigned on the basis of the percentage of the national income which is received from the production of each commodity. These weights, once determined, are not changed except at infrequent intervals. When they are changed, the index must be completely recomputed. The reason for this recalculation is that if the weights were changed each time the index is computed, an additional element of change would be introduced, with the result that variations of the index might be due either to changes in the value of money or to changes in the weights used.

It is not necessary for our purposes to go deeply into the manner in which index numbers are computed or the wide variety of formulas that might conceivably be employed for this purpose. It will be sufficient to examine one typical method currently used in these computations. Suppose we assume that the prices and weights given in the following table exist:

	1926 Price weights		1926 Price \times weight		1938 Price weights		1938 Price \times weight	
Copper (lbs.)	\$0.16	2,000		320	\$0.09	2,000		180
Wheat (bu.)	1.14	600		684	0.84	600		504
Corn (bu.)	0.90	1,500		1,350	0.60	1,500		900
Hogs (cwt.)	8.50	600		5,100	8.65	600		5,190
				7,454				6,774

If we divide the sum of 1926 prices times weights into the sum of 1938 prices times weights, multiply by 100 and subtract 100, we shall determine the percentage of change in the totals for the intervening period, for example, 7,454 divided into 6,774 equals .908, or a decline of 9.2 per cent between the two dates. This method is known as the weighted aggregate and is used by such well-known statistical organizations as the United States Bureau of Labor Statistics.

The list of commodities which has been used in this table is clearly inadequate to serve as a measure of the value of money, regardless of the point of view adopted. The indexes which are published consist of various numbers of price quotations ranging from 15, in the case of the indexes which are computed daily such as the Moody index, to about 800 in the monthly index of the United States Bureau of Labor Statistics.

Published indexes. — Two examples of published indexes may afford a clearer idea of the process by which indexes are derived. Take, as an example, the index made available monthly by the Federal Reserve Bank of New York (see Table 33). An examination of the constituent elements and weights reveals the fact that this bank follows the theory that the best selection of items is accomplished by giving representation to all the parts of the price system, rather than by basing its choice upon commodity prices alone.

TABLE 33. COMPONENTS AND WEIGHTS OF THE INDEX OF GENERAL PRICES, FEDERAL RESERVE BANK OF NEW YORK

(Relatives, 1913 = 100)	
<i>Component</i>	<i>Weight</i>
Industrial prices — nonagricultural wholesale prices	10
Farm prices at the farm	10
Retail food — 15 cities	10
Rent — 32 cities	5
Clothing, fuel, furnishings, etc. — retail	10
Freight — transportation costs	5
Realty value — urban and farm	10
Securities — bonds and stocks	10
Equipment and machinery	10
Hardware prices	3
Wages — composite of Federal Reserve Bank of New York	15
Automobile prices	2
TOTAL	100

This index unquestionably is valuable, for it reveals all the items that might conceivably use the circulating money. There have been periods when the general level of prices advanced at the same time that wholesale commodity prices were falling.

A second type of selection is that which is made by the United States Bureau of Labor Statistics. The technique employed by this bureau is to compute indexes of the prices of ten separate groups and then to combine the resulting groups of indexes into one single measure of the movement of prices. The eleven resulting indexes, which have been published separately, are: (1) farm products, (2) foods, (3) hides and leather products, (4) fuel and lighting, (5) textile products, (6) metals and metal products, (7) building materials, (8) chemicals and drugs, (9) house furnishing goods, (10) miscellaneous, and (11) all commodities. This classification represents most of the components of the wholesale markets, but it will be observed that the New York Reserve Bank index includes security prices, real estate values, rent, machinery, and wages, which are included only by implication or indirectly in the Bureau of Labor index.

The question might arise as to which of these, or the many other indexes that might have been selected as examples of index construction, is the best. The answer, like many which arise in the complex field of economics, cannot be more than approximately definitive because the best index is only best in terms of the use to which it is put. If an index which will readily reflect changes in prices in the business cycle is desired, the most appropriate is one containing a few items that have been chosen for their responsiveness to business fluctuations. The Harvard Bureau of Economic Research has computed such an index with this purpose in mind. If the purpose is to measure changes in the value of money, we will find defenders for both of the indexes which have been described above, for each of them is appropriate to certain kinds of explanations of price changes. Other economists, for example J. M. Keynes, favor for this purpose the use of an index number based upon the prices of consumers' goods.

From the standpoint of those who would have the level of prices controlled by central bank or government action, a logical selection would include many different types of indexes. By this method it is possible to determine more clearly the particular elements in our

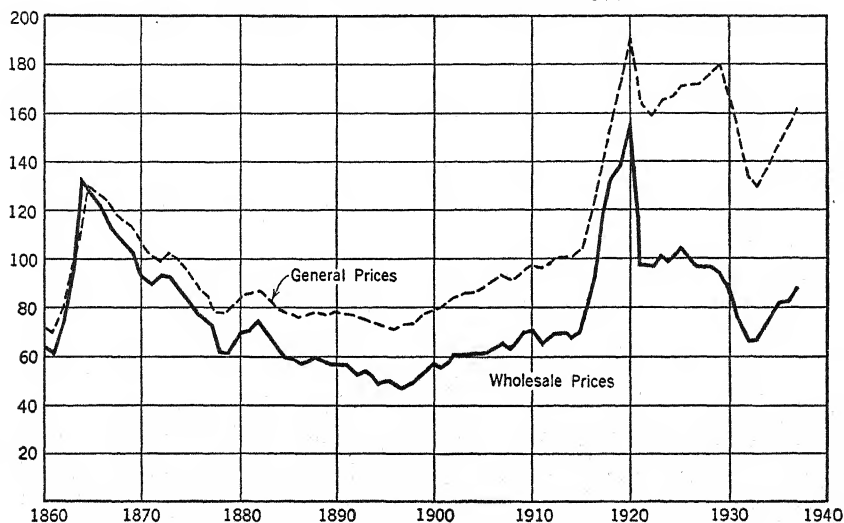
system of prices which are moving most rapidly, possibly as the result of inflationary forces. Control under such conditions would have to be directed toward the specific point of inflation in contrast to the action which would be undertaken in case the entire price structure were moving in one direction or another. There is a growing number of students, especially among Continental writers, who believe that the only way that price changes can be studied is by the use of indexes of the subsidiary levels of prices, that is, the groups of prices that result from classifications based on either economic function, sensitivity, or some other differentiation. To the student who is attempting to draw his own conclusions concerning price changes and their probable future course, this method seems most likely to produce useful results. It should be remembered that most of our problems concerning the value of money grow out of the fact that changes in this value do not affect all groups in the same way.

The value of using more than one index in the study of price behavior is indicated by Chart 10, which contains a comparison of the two indexes which we have examined. On the basis of the United States Bureau of Labor index, prices fell in 1933 to the level that had prevailed during the prewar years; but on the basis of the New York Federal Reserve Bank index, prices were still about 30 per cent above the prewar level. It is apparent that the former index gives greater weight than the latter to those commodities that are flexible in price. The inclusion in the bank index of such items as food prices, rent, and transportation costs makes it more inflexible to changes in the value of money, while the inclusion of wages gives it an upward movement not shared by the Bureau of Labor Statistics number. Moreover, the difference in the movement of the two indexes between 1922 and 1929 was caused mainly by the use of security and real estate values in the bank index. It should be clear, therefore, that the use of the two indexes rather than either one alone gives a more accurate representation of changes during these years.

Limitations on price measurements by means of index numbers. — In view of the fact that our theory of money must explain changes in the value of money, limitations in our measurements of these changes must be clearly understood. A theory can be strictly logical and adequate and still fail to explain all the vari-

ations which occur in the value of money as that value is reflected in a series of indexes. It has been shown in the preceding material that attempts at measurement are as yet unsatisfactory; there are also other reasons which limit our efforts in this direction and, therefore, vitiate attempts to explain completely the behavior of money as it affects the level of prices.

CHART 10. PRICE INDEXES, 1860-1937



One of these limitations arises from the fact that these measurements take place in a dynamic world in which the relative importance of commodities and services is constantly changing. Consequently, an index that measures fairly comprehensively the prices of today will be out of date by an indefinite amount in measuring the prices of greatest significance five years hence. For example, the extent to which steel can be reprocessed into higher and higher types of goods today makes its price much more significant than it was in 1900. An opposite trend can be noted in the decline in the comparative importance of agricultural commodities where the more rapid growth of other industries has decreased that proportion of our national income which we secure from farming. In the future, the increased use of agricultural products as industrial raw materials may reverse this trend, but until it does so, some of our indexes will be less and less representative of our price system.

Finally, no particular intercorrelation exists between the various parts of the price system, which can be considered "right" or "normal" in an economic sense. Suppose that during the period from 1929 to 1937, the prices of farm products declined 50 per cent, industrial prices declined 25 per cent, and the prices of real estate and securities declined 70 per cent. It cannot be concluded from this alone that some of the prices have declined too much and others too little, for we have no standard by which to draw such a conclusion. The results might have been entirely different if our measurements had been applied to 1926 or 1925 or some other date. Other possible explanations might be that certain lines have experienced a higher rate of technological advance and that, as a consequence, their prices should have fallen more or that large surpluses existed in certain industries at the beginning of the period and their liquidation was a major factor in the declines that followed.

Conclusions. — It has been shown in this chapter (1) that price changes have unfavorable effects upon the efficiency of the economic system, both in the realms of production and distribution of income, introducing a fortuitous element into both which is not consistent with a system such as our present-day economy; (2) that numerous methods have been proposed by which changes in the price level might be appraised, each of these methods having its value in understanding the events which accompany a movement of the general level of prices; (3) that each of the proposed methods of selecting commodities to be included in an index is appropriate only to the task which is undertaken and that the conception of this task is determined in major part by one's theory concerning the reasons for price changes; and (4) that it is impossible for one to expect a theory of money value to explain all the movements of an index of prices, for these indexes may exhibit changes that are a result of faulty statistical techniques.

SUGGESTIONS FOR FURTHER READING

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CHAPTER XXI

THE VALUE OF MONEY

Introduction. — The purpose of the preceding chapter was to show the manner in which approximations to the value of money are currently determined and to show the organization of economic values which influence the selection of commodities to be included in indexes of prices. The most important factors involved in the determination of the value of money will be considered next; succeeding chapters will further elaborate these factors in terms of modern money.

As an approach to the problem, let us assume that we are attempting to explain the level of prices in the automobile industry. Our explanation will then be in terms of the level of costs in this industry and we shall examine recent trends in wages and the costs of raw materials, such as cotton, rubber, and steel, as sources of information concerning these costs. Further, an inquiry will be made into the prospective demand for automobiles during the year, as it is indicated by the trend in business and used-car sales, the prospective competition of other forms of transportation, and the trend in sales of such unrelated products as clothing, housing, and household products. The latter would be included on the assumption that if the public bought more of these things, it would have to curtail its expenditures for automobiles, unless incomes should increase. It is clear from the above illustration that a study of automobile prices would be centered in part on the industry itself and in part on factors related to the industry through the entire economic system. This illustration is useful in pointing out that in examining the determinants of money value, money itself must be studied, but the behavior of money must also be related to the economic system in which the money is used. The value of money is a result of what might be called "monetary" factors, and also a result of the industrial and economic conditions, and governmental decisions.

THE QUANTITY THEORY OF MONEY

The equation of exchange. — Many writers regard problems concerning money value as too complicated to be expressed in a single mathematical formula, encompassing the major elements which operate to determine this value. While this point of view is unquestionably sound, nevertheless a formula can provide an explicit statement of some of the variables and a point of departure for the examination of other significant elements.

One of the two types of formulae used for this purpose is the form popularized by Professor Irving Fisher. It involves the statement of an identity, $MV + M'V' = PT$, wherein M represents the hand-to-hand currency held by the public, not including the cash held by the banks and the Treasury; V is the velocity of circulation of money ascertained by dividing the total volume of money payments in a given period by the number of pieces of money in circulation; M' denotes the volume of bank deposits which are subject to withdrawal by check; and V' is the velocity of circulation of deposits, ascertained by dividing the total volume of check payments during a given period by the average number of dollars of deposits during the period. P signifies the average level of prices at which transfers of money and credit are made, and T is the volume of trade or the volume of transfers made during the period. The right side of the equation is a statement of the money value of all transactions and is, therefore, identical with the left side, but to be valid this identity must be defined in a given way. For example, what is the meaning of "the volume of trade"? Does it include transfers of claims to wealth, such as stocks, bonds, and deeds to real estate? If so, how will their inclusion affect the computation of the average price, or P ?

Definition of terms. — Two problems are involved in defining M in the equation, namely, the inclusion or exclusion of bank and Treasury cash, and the treatment accorded public hoards of currency. The exclusion of Treasury cash is made on the ground that until the money is released by the Treasury, it does not constitute a part of the circulating currency. Instead it consists of a fund in the Treasury which may be released in the form of Treasury currency. In a sense, the inclusion of bank cash would involve double counting, for as long as it is held by the banks, it may be considered a part of the necessary reserves and, therefore, vital to the support of the

bank deposits included under M' . The problem concerning hoarded cash is that as long as the cash is held, it is not circulating and, therefore, not available for the transfer of goods, except in the event that the hoarders change their minds and decide that they prefer goods to money. Hoards of cash may be counted as part of M since, it will be remembered, the velocity of M is defined as the average turnover of all pieces of money. The velocity of money is, therefore, a weighted average of the rates of turnover of the individual money units. Those units which are hoarded have a zero rate, other units may be exchanged 10 times, and still others, 20, 50, or 100 times.

Since bank deposits which are subject to check accomplish the same purposes as those performed by currency, one may question the need for a distinction between checks and currency. While both of the variables serve as means of payment, they fluctuate because of entirely different circumstances and, in practice, are related to separate types of economic changes. In this connection, Angell states that

Outside currency moves in close relation to measures of retail expenditures and of small incomes in industry, but at turning points it moves simultaneously or with a slight lag, not with a lead. It also seems to reach peaks somewhat later than the points at which deposits and such broad indices of current activity as industrial production and car loadings have begun to turn downward, and it seems to reach a bottom after they have begun to turn up.¹

In connection with M' , he says:

Circulating deposits appear to move roughly with, and usually a little behind, the general average of such broad measures of the volume of economic activity as industrial production, car loadings, factory employment, and security transactions, but not with any one of them alone, nor with commodity prices.²

In the past, some writers have been inclined to regard these two elements as if they were subject to the same sets of forces and, thus, as if they varied together in the business cycle. Angell's study has revealed that, as we might expect, each of these constituents of the supply of money is related to a somewhat distinct group of economic phenomena. Furthermore, from 1893 to 1929 the steady decline in the ratio of outside currency to deposits indicated the growing

¹ Angell, J. W., *The Behavior of Money*, pp. 57-58. New York: McGraw-Hill Book Company, 1936.

² *Ibid.*, p. 58.

importance of bank credit as a means of payment compared with currency. This trend was temporarily disturbed during the depression when people, fearing bank failures, converted their deposits into currency.

The term "velocity" has two separate meanings in monetary theory, both of which are relevant to the study of money value. Exchange velocity is defined as the average number of times a unit of money is transferred during a given period of time. If the purpose of the theory is to explain only the level of commodity prices, then velocity must be limited to transfers of goods and services and must, therefore, exclude transfers of securities and deeds. Where the general price level is considered, however, these elements may be included. The exchange velocity of money, as defined above, is related to the degree of differentiation existing in the economic system; the more firms there are producing goods and the higher the degree of specialization that prevails, the greater will be the volume of goods transferred. It is not related to "roundaboutness" of production except in the sense that roundaboutness in the past was a part of the process of specialization.

The second use of the term "velocity" arises in connection with the notion of a flow of money through the economic system. If one stands at one position in the processes of production and distribution and observes the flow of money, he will find that the money units flow in a circle and return to him. He spends and invests money, which is used by those who receive it for the purchase of materials and labor services; finally, he receives it again in the form of wages, interest, profits, or rent. This description is inaccurate to some extent, as each unit of money does not make the same circuit; some of the units received by retailers are spent with other retailers who distribute this money as wages locally. Other parts of the stream of payments reach far from the community in which they are first spent on consumption goods and circulate to the farthest sections of the economic system. Some idea of the way that this flow moves may be obtained from Figure 29, in which there is a series of circles, all tangent to the same point, the consumer. Circles with the smallest radii may be thought of as representing the flow moving from retailer to retailer and back into consumers' incomes in the form of wages. The larger circles represent the longer parts of the flow and indicate the payments which flow into

the capital-goods industries, such as locomotive equipment, steel, and transportation of ore. The heavy line indicates the average of the circles which, in reality, should be weighted by the relative amounts of flow in the individual circles.

The circle drawn at the side indicates what may be designated "financial circulation"; this includes the transfers of claims which are only indirectly related to the productive processes. Money that flows into this section moves from one set of hands to the other in effecting transfers of securities and real estate, and is not a part of the general flow. Its exclusion prevents circular velocity from being a hybrid concept, as Keynes has called it. However, as is shown in Figure 28, funds are constantly being transferred from the general circulation into the financial circulation and back again. At times, the influx of funds into the financial circulation may be greatly increased (this seems to have happened in the United States from 1926 to 1929); at other times, the return flow will be the larger. In theory, we may distinguish the "financial" circulation from the general circulation, but in practice, such distinctions are difficult to identify since they represent abstractions from a highly complicated system of payments. The purpose of making this distinction is to show the nature of the flow of money, a subject which will occupy our attention again in the examination of measures to control the level of prices by central bank or government action.

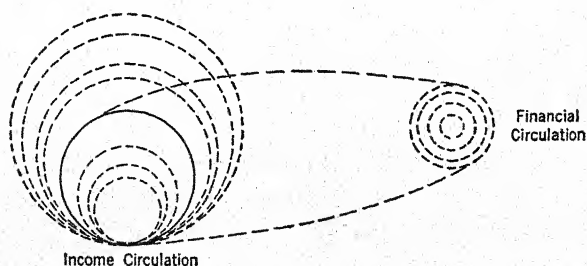


FIG. 29. CIRCULAR VELOCITY IN ACTION

The best available measures of the actual changes that occur in these two types of velocity are those provided by the work of Angell which, with respect to exchange velocity, shows that there exists in 140 cities, not including New York City, a clear intramonth movement and a strong seasonal pattern which declines irregularly from February to September and then rises again in November. These

measures, although it is admitted that they are approximations, seem to indicate that velocity is more susceptible to change than is the volume of bank deposits, and is, therefore, probably the more important means of financing new transactions in response to short-term changes in demand.³

The measures of circular velocity provided by Angell indicate that this type of velocity was remarkably stable in the years from 1909 to 1929, after which it declined sharply by approximately one-third or from about three times a year in the earlier years to somewhat less than twice a year for the years from 1929 to 1932. Angell explains this stability in the following terms:

First, there is ground for thinking that the general level of this circular velocity is determined chiefly, under ordinary conditions, by the general monetary and payment habits of individuals and business firms at large, by the frequency with which they make payments, by the extent to which the various payment and expenditure schedules overlap, and by similar factors, including indirectly the character of business organization and the complexity of the productive and exchange processes. . . .

Second, however, a different factor is also in play, and one which would be expected to produce substantial year-to-year fluctuations. . . . This factor may be described loosely as changes in the size of "idle" balances held, especially those held by business enterprises.⁴

By implication, the other components of the formula have already been defined, since the volume of trade is conditioned by the same group of factors that determines the exchange velocity. If a society produces its income under a highly specialized system, the volume of transfers will be large, hence our term T will be large also. Another source of variation develops from the periods of prosperity and depression as income rises and falls. This is only indirectly related to the degree of specialization which prevails. The stage of the business cycle in the short run and the degree of specialization in the long run are the major variables determining the size of the volume of trade. P has been previously defined as the price level of goods in general as well as of services and financial transactions.

As the formula stands, it fails to allow for the influence of payments for goods purchased on credit in previous periods and probably at price levels that have existed in the previous period. To

³ Angell, J. W., *The Behavior of Money*, pp. 93-128. New York: McGraw-Hill Book Company, 1936.

⁴ *Ibid.*, pp. 139-140.

some extent, such transfers cancel themselves since the payment of old debts during a given period will be offset by the creation of new debts during the same period. But the side of the equation that represents money may be corrected by an amount equal to the difference between old debts that are cancelled and new debts that are created.

The Cambridge equation.—A different statement of the elements which determine the value of money is preferred by some students, notably the English economists. In general, they do not deny the validity of the Fisher equation, but believe a different expression of money elements will shed greater light upon the factors which determine the value of money. Their formulas have been numerous. Only one will be considered here.

Pigou⁵ states his equation of prices as follows:

$$P = \frac{kR}{M}$$

Instead of P representing an average of prices, as in the Fisher equation, a different assumption is followed here. This is

... that the value of all commodities other than money in terms of one another is determined independently of the value of money. On this assumption, the value of any combination of commodities in general can be cited in terms of any single commodity. The aggregate of all commodities is represented by so many bushels of wheat; and the value of money by the number of bushels of wheat which a unit of it will purchase.⁶

Therefore, in Pigou's equation, P is the price of money in terms of commodities; R is the total resources of the community expressed in terms of wheat; k is the proportion of these resources which the public holds in the form of titles to legal tender. The resulting formula is a representation of the demand schedule for money.

Two of these terms, k and R , should be described more fully. The public is confronted by a number of variables in deciding what proportion of its aggregate resources it will hold in the form of idle balances. First, a certain amount must be held as a balance between the receipt and disbursement of money income. This point will be discussed again in the following section. Second, the public may decide to hold balances because other forms of invest-

⁵ Pigou, A. C., "The Value of Money," *Quarterly Journal of Economics*, November 1917, pp. 38-65.

⁶ *Ibid.*, p. 40.

ment are too great risks. Reasons for reducing balances held are: (1) the loss of possible income as a result of the holding of cash, and (2) the sacrifice of present consumption required for such holdings.

Changes in R are dependent upon general increases in the efficiency of the factors of production. These may take the form of mechanical inventions or improvements in managerial techniques, so long as the effect is to increase the quantity of resources of the community.

Reconciliation of the two equations. — While the equation formulated by Pigou emphasizes the desires of individuals to hold money, it is in agreement with the Fisher equation as far as internal consistency is concerned. A reconciliation of the two equations is achieved by Pigou in the following manner: "Now since P in my equation is the price of money in terms of things and P' in the 'quantity theory' is the price of things in terms of money, it follows

that $P = \frac{1}{P'}$. Hence $\frac{kR}{M} = \frac{T}{MV}$ or $kV = \frac{T}{R}$." ⁷ Therefore, the

formal difference between the two equations is that the Fisher equation seeks to account for changes of prices, while the Cambridge formula is concerned with the value of money, which is the reciprocal of the price level.

Short-term and long-term analyses. — Both of the above equations are investigations of the "normal" value of money, or the relationship between prices and the supply of money over a period of time. No reason is given for changes in the supply of money, either during the short-run period or during longer periods. This lack of a reason does not mean that these writers do not hold strong opinions with regard to why these changes take place. But such opinions are not necessary to their statement of the relationship of money and prices under normal conditions.

Many students holding to the quantity-theory tradition have abandoned the attempt to establish such a rigid degree of causality for the money factor and now admit that the situation under analysis is far too complicated to permit such simplified reasoning. In the material quoted from Angell's study, the volume of money

⁷ Pigou, A. C., "The Value of Money," *Quarterly Journal of Economics*, November 1917, pp. 52-53.

and credit is not shown to be closely correlated with the level of prices alone, but with a broader representation of the whole economic process. In short-run periods, the velocity of money is far more responsive to the needs of business than is the volume of money *per se*. This situation is to be expected, since velocity itself is determined in part by the needs of trade and the decisions of businessmen in interpreting these needs. To the extent to which business has it in its power to alter the velocity, it may properly be said that business makes its own money; by speeding up the turnover of money, it enables a larger amount of work at a given price level to be done with each unit. Furthermore, there is no reason why, in a period of improving business and advancing prices, the advance might not engender a desire for more money and, thus, invoke an increase in the supply which would be available for the support of the higher level of activity and prices. Similarly, increases in the volume of trade, by changing the expectations of businessmen, may cause increases in the demand for loans, the disbursement of which will unquestionably have its effect on the price level. It cannot be denied that the volume of money itself may affect prices, not only as an essential condition to the rise or fall, but as a force of such magnitude that it brings about a reappraisal of the opportunities for profit. Such increases might arise from the expansion of loans by banks to the government, from new and large gold discoveries, or from the use of printing-press money made by the government.

To summarize, the quantity of money and its velocity are sometimes causes and sometimes effects of price changes. In most periods of price changes, the various elements of the equation are so intimately related to the complex economic pattern that it cannot be categorically stated that one or several elements are always causes and that the remainder are always effects.

The function of the equation of exchange. — The equation of exchange has been presented as a point of departure and not as a complete explanation of the value of money. In the form in which it has been stated here, or the available alternatives which might have been presented, it omits several variables that have proved useful in the past in gaining insight into the movements of prices. As the equations stand, they do not indicate why, when money increases by the same amount under two separate conditions, the

price responses that are invoked should be quite different. Other and more extensive criticisms might be presented against these statements of the forces leading to price changes, but if the formulae present in a general way some of the more important considerations that must be taken into account when an analysis of changes in the value of money is made, they will have served their purpose here.

Up to this point in the analysis, the variables considered important to price level fluctuations have been the quantity of money and credit, the velocity with which these quantities are used in effecting transfers of goods, and the volume of trade. As a supplement to this list of strategic elements, we must recognize (1) the psychological elements, (2) the technological factors, and (3) the level of production. These elements are introduced for the purpose of showing the volitional aspect of price changes and the way that the "real" elements in the economic system condition, modify, and even nullify the influence of factors in our original list.

PSYCHOLOGICAL ELEMENTS DETERMINING THE VALUE OF MONEY

The economists' struggle to arrive at an adequate explanation of human conduct has been long and by no means completely successful. The subjective element has been employed as a separate theory of the valuation of individual goods. Just after the turn of the century, Irving Fisher stressed this element in his analysis of the rate of interest. Still more recently, these subjective elements have been introduced in other forms by such outstanding writers on money and business cycles as Professors J. M. Keynes, J. R. Hicks, B. Ohlin, E. Lindahl, and G. Myrdal, in whose works are found discussion of "expectations" and "liquidity preference." In the studies of these men, the problem has been to make some generalization about human conduct sufficiently accurate and of sufficient content to permit this tremendously complex factor to be used in logical analysis. While the results are unquestionably promising, these generalizations about human conduct have not yet reached a stage of crystallization which would warrant their treatment in an elementary study of money. Yet our survey would be incomplete if this element in price changes were ignored.

The first and most apparent relationship between money and

human behavior lies in the decision which each person makes with respect to the amount of money he will hold, or as some writers have phrased it, "the amount of claims to real income which we shall hold in the form of money." The amount of money we hold depends, in part, upon the frequency with which we are paid; thus, if we receive an income monthly and spend it at an even rate throughout the month, we hold an average amount equal to one-half of one month's income. If instead, our payment were received weekly and spent at an even rate, we would hold an amount equal to one-half of one week's income. Under the latter method of payment, we would hold only one-fourth as much money in the form of idle balances as we did in the first instance. The amount of money held also depends upon the amount of the income which is to be used for consumption purposes. Suppose two individuals receive monthly incomes of \$500 and \$200 respectively. If the income of \$500 is divided between saving and spending in the proportion of 60 to 40, then \$300 may be used to buy securities or to make other investments immediately, and the remaining \$200 could be spent throughout the consumption period. If the second individual uses his entire income to maintain his standard of living, then both will hold the same volume of money. However, if the savings are not immediately invested, a varying amount of money will be held, awaiting the development of suitable opportunities for investment. If the yield on investments declines to a relatively low rate over a period of time, it is possible that many savers would prefer to hold cash and that such holdings would then assume a long-term upward trend, provided new money is being created.

The manner in which prospective yield and the business outlook affect the holdings of cash is illustrated in world monetary history since 1929. When the world economic collapse began, there was a rush to sell goods or to convert these holdings into bank balances. Having secured these balances, the next step was to reduce debts to banks by giving checks on deposits, thereby reducing the volume of outstanding loans and deposits. The first effect, then, was to diminish the available supply of money. This action had unfavorable effects upon the solvency of business concerns and forced large numbers of failures. The repudiation of bank debts by failing business concerns contributed to the mounting skepticism concern-

ing the banks' ability to continue to redeem their deposits. The sequel was a demand for cash at the banks by the public and an increase of bank failures. The final stage in this collapse grew out of the restriction of gold payments by the sterling group of currencies and the fear that the United States would be forced to follow suit. This fear produced the result that was anticipated: the hoarding of gold depleted the gold reserves of certain countries to the point where they could no longer redeem their obligations. The entire debacle from the monetary point of view was a collapse of confidence or a world-wide reversion to a more primitive form of money under the influence of fear. A destruction of public confidence produced a desire to exchange goods and securities for bank deposits, to convert bank deposits into cash, and to attempt to secure redemption of the cash in gold.

This whole dramatic series of events clearly illustrates the relationship of the public's attitude toward its holdings of money and the level of prices when prices are falling. During periods of inflation, that is, when there is a sudden decline in the demand for cash to hold, the opposite type of action is demonstrated as the public attempts to convert cash and bank deposits into goods and securities. In periods when the change of prices is less rapid and more enduring, the desire to hold cash may be influenced by the price movement. When prices have been rising for a number of years, the public is likely to regard the change as a long-term trend and will begin slowly to reduce its holdings of cash, for in this way it can avoid the loss of purchasing power inherent in a rising price level. At the same time, the public has the opportunity to select the commodities that rise fastest and to secure, thereby, a net gain of purchasing power.

TECHNOLOGICAL IMPROVEMENTS AND THE PRICE LEVEL

The subject of technological improvements is not usually presented in connection with the study of changes in price levels, for it is considered a nonmonetary factor which must be accounted for on other grounds than an investigation of money itself. While this point of view may be accepted provisionally, our task is to explain the level of prices and their changes, whether these changes are monetary or nonmonetary in their origin. The student's interest

should be in causes of price changes, and not solely in the important monetary elements involved in the change. Since most students of the money problem admit that changes in the money supply have a variety of relationships to the level of prices, depending upon the accompanying responses induced in the economic system, in the present section and in the one following, an attempt is made to indicate broadly some of the more important forces which actually condition the change of prices in response to changes in money supply.

A technological improvement may be defined as a change in the method of production which increases the volume of output per unit of input. These increases are usually the result of the discovery of new methods of production, improvements in the technique of management, or increases in the degree of specialization. By increasing the potential real income of a country, they increase the volume of trade or the T in the equation of exchange. As a result of this increase and without changing any other elements in the equation, prices can be expected to fall at a rate which bears some relation to the rate of technological advance. If, however, the other elements are also changing, the results are likely to be modified. There are several interesting possibilities with respect to these changes.

It is possible for a technical development to be reflected in an improvement in the use of cash, in which case, bank loans might be reduced, resulting in a fall in bank deposits. This sequence of events could expedite the fall of prices incident to a lower level of costs in industry. On the other hand, the improvement might produce a higher velocity for the circulating money and credit and provide the means by which the price level would be prevented from declining, despite the increase in the volume of goods to be sold. This possibility could be strengthened by the reduction of hoards of cash occurring as a result of the higher level of industrial profits. To some degree, then, a technical advance in the methods of production might create the extra money needed to support the price level. It should be understood, however, that there is no logical basis for assuming that this will be true of any particular period because the changes accompanying a technological advance will be influenced by the nature of the advance and its effects upon industrial organization.

These changes in the relations of money and goods are examples of situations in which the primary forces in price changes are the results of nonmonetary conditions, and are indicative of the futility of oversimplified explanations of price changes which are made exclusively on the basis of money and credit.

The difficulty of employing the technological element in studies of contemporary trends in prices arises from the virtual impossibility of identifying the change until after it has occurred. A change is only as significant as its effect in increasing output or in lowering costs; its significance cannot be determined until the improvement has been in operation for some time. Despite these limitations, when technological changes are known to be occurring, we can be fairly sure that a fall in the price level is more likely than a rise. A rise in the price level under these circumstances would indicate the existence of expanding profit margins and conditions which foster speculative excesses. Some writers have gone so far as to condemn as unfavorable a price level which, though falling, is doing so at a slower rate than could be justified by the prevailing rate of technological improvement.

PRICES AND THE LEVEL OF OUTPUT

Recent American economic literature abounds in the use of such terms as "the capacity of production" and "the limits of production," frequently without defining them. One very good reason for this omission is the difficulty of determining the precise productive limits of the economic system at any one time. For example, the meaning of "full employment" will vary depending upon whether the term includes one, two, or three shifts in production, all workers, able-bodied workers, women, children, all capital, profitable capital, and many other elements. Also, "100 per cent capacity" can be given content only in accordance with the most theoretical assumptions. In our present study, we may find it more desirable to think in terms of relatively flexible or inflexible output, defining flexibility in terms of the response of prices to an increase in money demand. Thus, if production is at a low level and a 20 per cent increase in demand occurs without inducing a rise in prices, it can be said that output was perfectly flexible. If the increased demand is accompanied by no change of output and a sudden

price change, then output can be said to be perfectly inflexible. While such conditions are rarely encountered, they will serve to illustrate how increases in the quantity of money will have a variety of possible effects upon prices, depending upon the level of production at the time the increases occur. If a country is emerging from a severe depression at the time an increase in demand occurs as a result of an increase in the quantity of available funds, then it is probable that the price changes will be small, if they occur at all. This is the major reason why periods of inflation seldom start immediately following a depression. Ayres, in his study of the probability of a period of inflation in the United States, says:

Probably there are at least five sets of conditions that would have to be fulfilled here in order to produce the kind of inflation that took place in France and Italy after the war. In the first place we should have to have such a continued period of business recovery as would lift the volume of production to something like normal levels so as to make outputs approach capacity limits in a good many individual lines of manufacturing. This would result in rapid price advances. Probably the condition could not develop without a general revival of construction taking place at the same time.⁸

A similar view is expressed by Mitchell⁹ in his analysis of the price changes occurring during the World War and the years following, in which he shows the relation of a high level of output and of an extraordinary demand to the price changes of this period and the years immediately following.

Having recognized the relation of output, prices, and the quantity of money, we must next find ways of identifying a level of output which will affect the behavior of prices. It has already been stated that this relationship is visible and identifiable only when business volumes are extreme in either direction, that is, when business activity is either very high or very low. Since business activity is most variable in the heavier lines of production, it is probable that our clues can be found here in such statistical series as the amount of construction activity, particularly for industrial purposes, the rate of production in the machine tool and allied lines, and the volume of unemployment. Measures of the latter, while admittedly limited in coverage, will inform us of the amount

⁸ Ayres, L. P., *Inflation*, pp. 23-24. Cleveland: Cleveland Trust Company, 1936.

⁹ Mitchell, W. C., "Prices and Reconstruction," *American Economic Review*, Supplement, 1920, pp. 129-155.

of labor, and particularly skilled labor, that can be drawn into employment in a period of rising prices. If, at the peak of the business cycle, factory buildings and machinery are being built rapidly, then it is likely that the available capacity is being used to the limit. Under these circumstances, an inflexible supply exists and a rise in prices might be approximately proportionate to the rate at which the supply of money is being augmented. When the new buildings and machines are completed, they may reverse this process, but until their output becomes available to the market, prices will continue to rise. At the opposite extreme of business activity, these same measures reflect a period of flexible output, during which changes in the quantity of money will have only small effects upon the level of prices.

This treatment of the influence of output upon the level of prices sheds light on the question of the importance of qualitative distinctions in the granting of credit. Certain persons have contended that the amount of credit that can safely be granted by the banks is determined by the amount of self-liquidating loans applied for, and that if loans are granted only for self-liquidating projects, then the bank deposits resulting from the loans will not greatly influence the level of prices. This contention grows out of the belief that self-liquidating loans cause an increase in output while other loans do not. Let us examine this distinction in terms of the statement of the relation of output to prices given above.

Suppose a manufacturer borrows \$10,000 at his bank to be used in manufacturing goods on orders which he possesses. He spends the money for materials and wages and sells the goods at a profit, paying the bank the interest and principal at the maturity of the loan. During the time the loan was outstanding, he disbursed into the economic system a quantity of money and a quantity of goods which were valued at a price greater than his disbursements by the amount of his profits. His expenditures thus provided most of the funds necessary for the purchase of the goods and, according to the doctrine being examined, there was no reason for the price level to change. By this same analysis, if the money had been loaned by the bank for the purchase of securities or real estate, there would have been no increase of output and hence the greater quantity of money would have been matched against the same quantity of goods with a rise in prices resulting.

This analysis may be criticized because of its failure to distinguish between periods of high output and those of low output. If the loan for productive purposes had been made at a time when the economic system was already producing at a high rate, the goods and labor which were used in the production would have been purchased on a rising price level and would have augmented the rise. If the purchases had been made when activity was at a low level, there would have been no reason for the loan to have caused any price advance. This would also have been true if the loan had been made for the purchase of securities, for eventual expenditure of the funds would have served, when output was low, to raise the level of output rather than to raise prices. If any loans are made when production is high, they are likely to support a previous price advance or finance a new one. It, therefore, seems more desirable to distinguish the different types of conditions in the economic system in appraising the effect of an increase in credit rather than relying solely on the type of transaction which places the new money in the economic system.

Summary. — The reasons for changes in the level of prices grow out of such monetary elements as the quantity of money and its velocity, and such nonmonetary factors as the volume of trade, the pace of technological advance, the level of output, and changes in public attitudes regarding the holding of money. The pattern is too complicated to permit dogmatic assertion of causal sequences, for each plays a part, albeit a variable one, in producing a changing price level.

SUGGESTIONS FOR FURTHER READING

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CHAPTER XXII

THE SUPPLY OF MONEY

Introduction. — Up to this point, the study of the value of money has been directed toward its relationships to a number of economic and human forces. No inviolable or mechanistic relationship has been presented because none has yet been found to exist; therefore, in discussing the variables which operate in determining the value of money, we are forced to continue to rely upon a statement of tendencies. An additional consideration is the capricious, and often unpredictable, influence of the psychology of the public on the relationship between money and its value. Our knowledge of the character and effect of changes in economic organization is still incomplete and offers no basis for dogmatic assertions. Proof of this may be found in the inaccurate forecasts of changes in commodity prices, upon which we are forced to rely at present. If all the elements causing prices to change were known and properly weighted, forecasting would be entirely accurate.

The equations of exchange which were presented in the previous chapter postulate a close connection between prices and quantity of money, when quantity is represented by the absolute amount of currency and credit and their respective velocities. It has been shown that the most significant influence on quantity, over short periods, is velocity. We have yet to account for the absolute amount of money and credit, ignoring for the moment their rates of circulation.

The previous chapter has shown that changes in the velocity of circulation of currency and credit add substantially to the effective supply of money over long periods of time. These changes have been shown to be related to such factors as the growth of population and the degree of business differentiation; therefore it is unnecessary to study them further here.

The present task is to examine the causes of variations in the absolute supply of money and credit. It should be clear that these variations may occur partly because of changes in the circum-

stances which restrict the supply of money and partly because of changes in the demand for money. The first of these, that is, the circumstances limiting the supply of money, will be considered in the present chapter, while the second will be treated in the succeeding chapter.

THE SUPPLY OF MONEY AND THE SUPPLY OF GOLD

Gold supplies have been one of the basic reasons for changes in money supply since the general adoption of the gold standard throughout most of the commercial world in the last quarter of the nineteenth century. The supply of gold is significantly related to the supply of money in a number of ways. In the first place, it should be remembered that gold has been used both as money and as an industrial metal for the manufacture of such objects as jewelry and optical frames. Therefore the supply of gold in existence at any one time may be divided in various proportions between monetary uses and industrial uses. In the second place, the annual production of gold is related to its price, the costs of its production, and the discoveries of new ore bodies. Third, the amount of money that can be created on the basis of a given volume of gold is determined by reserve requirements, by the type of currency in circulation, as well as by the type of monetary systems prevailing throughout the world.

Nonmonetary uses of gold. — The nonmonetary uses of gold constitute a highly variable but frequently important source of demand for it. Until recent years, the Orient absorbed a major part of each year's production.¹ Since 1931, however, industrial uses plus Oriental demand have only taken about 5 per cent of production. While this absorption is monetary in the sense that money serves as a store of value, it does not directly affect prices by being so used. During periods of bad business and crop failures, the world's monetary gold stocks have been augmented by supplies released from private hoards, in order to prevent a fall in standards of living. Gold contained in jewelry is also sold during periods of depression, the gold finding its way into the world's treasuries and central banks. During the period from 1931 to 1937 the flow of gold was out of hoards rather than into them.

¹ Warren, G. F. and Pearson, F. A., *Gold and Prices*, p. 123. New York: John Wiley and Sons, 1935.

Table 34 shows that dishoarding and return of scrap made up a total equal to about 40 per cent of the amount of new gold produced during these years.

While the data on the uses of gold throughout the world for nonmonetary purposes are not complete, Warren and Pearson² have stated that the industrial uses of gold in the United States are as follows:

	<i>Per Cent</i>
Optical frames.....	10
Watches and chains.....	15
Jewelry.....	25
Dentistry.....	25
Fountain pens.....	10
Chemistry, gold leaf, and miscellaneous.....	15
	<u>100</u>

TABLE 34. SOURCES AND USES OF GOLD, 1931-1937

(In millions of dollars)

	<i>October 1936 to June 1937</i>	<i>January 1931 to September 1936</i>	<i>Total</i>
<i>Sources of gold:</i>			
Mine output (excluding U.S.S.R.)	\$ 748	\$4,713	\$5,460
<i>Receipts from:</i>			
Indian private hoard.....	49	1,176	1,224
China, Straits Settlements and Egypt.....	12	355	367
U.S.S.R.....	149	373	522
Return of coin.....	.....	250	250
Return of scrap.....	66	733	799
Total.....	\$1,023	\$7,600	\$8,622
<i>Reported uses of gold:</i>			
Gold reserve increase (excluding U.S.S.R.).....	\$2,177	\$3,645	\$5,822
Industrial consumption.....	63	502	566
Total.....	\$2,240	\$4,147	\$6,387
Official holdings and private hoards	— \$1,217	\$3,452	\$2,235

Although the American industrial demand for gold has increased in recent years, it is still largely covered by the return of gold to the market in the form of coins or scrap. World net industrial consumption has been reduced by dislocations growing out of the

² Warren, G. F. and Pearson, F. A., *Gold and Prices*, p. 123. New York: John Wiley and Sons, 1935.

European War. In view of these circumstances, practically the entire world production of gold in 1939 was available for monetary uses.

Both the monetary and nonmonetary uses of gold vary directly with the volume of business and production in the world, consequently nonmonetary uses reduce the supply of gold when it is most needed to support world prices. By increasing the reserves of the central banks during periods of depression, these supplies may be instrumental in inducing or, at least, permitting lower interest rates at the banks than would have been possible had the gold remained in the hands of the hoarders and the owners of jewelry. Reductions of interest rates made possible by the availability of gold supplies have become less important than formerly, however, because central banks have developed controls designed to accomplish the same ends without considering changes in the gold supply. It can be said that, in those countries which are embarrassed by the lack of gold, the return of the gold from hoards may make it possible to increase their gold reserves without having to secure the supplies from other treasuries and central banks. Thus the return of gold may possibly ease money conditions and thereby contribute to the recovery of business volumes and prices in countries which lack an adequate supply.

Gold production as a source of money supply. — Despite variations in the world's gold supply as a result of the movement of gold into and out of the arts and private hoards, the major source of supply in a given year continues to be the amount that is produced in that year. These new supplies represent only a small part of the total monetary gold stock, varying from a low of 3.2 per cent of the total stock in the years from 1880 to 1884 to a high of 6.2 per cent of this stock in the period from 1910 to 1914. The ounces produced increased from a yearly average of 1,780,000 in the period from 1845 to 1849 to a yearly average of 22,366,000 in 1910-1914. A decline occurred from this period to 1930.³ The decline of world prices and the revaluation of gold reserves since then have brought further increases to new high levels of production.

Variations in the annual output of gold are due to four causes, namely, changes in costs of production, developments in mining

³ *Ibid.*, p. 133.

technique, discoveries of new resources, and increases in the price of gold. Each of these has been important during certain periods in the past. From 1873 to 1896, while the level of world-commodity prices was declining, production of gold in high grade ores was stimulated through the fall in production costs. Furthermore, ore bodies which had been discovered but whose low ore content did not permit them to be mined profitably could be worked. The discovery of the cyanide process of refining gold also increased the efficiency of refining methods and, thereby, contributed to the expansion of production. During the same years, gold sold for a fixed price at the world's mints. Once a parity between the money unit and gold was established, it was not subject to change.

In the inflation of the World War period and the years immediately following, the fall of the value of gold in terms of commodities was so great as to curtail production seriously, but after the departure from the gold standard in the depression years, the governments of the leading countries severed the relationship of their currencies to gold, thus either permitting or inducing by direct and calculated action the decline of the value of their currencies in terms of gold. The result has been that gold producers have received a sharply increased price for their metal. In the United States, this bounty is shown in an advance in the statutory price from \$20.67 to \$35.00 per ounce, and in England from a price of 84 to 168 shillings per ounce. Since the advance in the level of production costs has not kept pace with these increases in price, production has expanded enormously, as is indicated in the figures given in Table 35.

TABLE 35. WORLD GOLD PRODUCTION

(Fine ounces. Outside of the U.S.S.R.)

1930	\$20,923,000	1935	\$30,032,000
1931	22,326,000	1936	33,156,000
1932	24,254,000	1937	34,831,000
1933	25,578,000	1938	36,854,000
1934	27,296,000	1939	38,253,000 (est.)

Source: *Federal Reserve Bulletin*, June 1938, p. 470, and June 1940, p. 611.

Devaluation and the money supply.—The devaluation of currencies has a long history and is therefore not new to the field

of banking and money organization. Devaluation is accomplished by changing the relation of the currency unit to gold. Suppose a currency had contained 50 grains of gold for a number of years and then its gold content was reduced to 25 grains. If the gold is held by the treasury or a government-supervised mint, twice as many units of money might be issued as before on the same stock. Since the gold is owned by the mint, it is the recipient of the profit which accrues. Where gold has been in circulation as coins, it has been customary for the coins to be recalled by government decree, in which case title to all the gold is claimed in the name of the government. In describing the early actions of sovereigns this process was called debasement.

Laughlin has depicted some of the earlier arbitrary changes in the values of currencies as follows:

From the decline of the Roman Empire in the west, the confusion and variety of coins through the Middle Ages made changes in weight and alloy too numerous to recount. There was no production of gold or silver corresponding to the expansion of trade. In a foolish attempt to make the supply of precious metals go round, there was everywhere a constant reduction in the quality and weight of the monetary standard. The very unit itself was uncertain; the solidus reappeared as shilling or sou, the libra as the livre or lire, as a result of depreciation. The dishonesty of governments led to increasing the alloy, or reducing the grains of metal, in coins of the same name. . . . In France there were 150 changes on one century.⁴

In 1834, as a result of changes in the coinage ratios between gold and silver, a devaluation of approximately 2 per cent in the value of the American dollar occurred.⁵ Far more important from the standpoint of current conditions have been the devaluations of currencies since the inflations following the World War. Before this time, the French franc contained 290.322 milligrams of pure gold; on June 25, 1928, it was reduced to 58.95. The fall in the value of the franc since 1928 indicates that a further decline in terms of gold (about 52.9 per cent) has occurred. Similar changes have developed in all the world's currencies. The price of gold in sterling was about 84 shillings per ounce before September 1931; now (1941) the price stands at 168 shillings per ounce. Therefore, the English pound sterling has been devalued 50 per cent.

⁴ Laughlin, J. L., *Money, Credit, and Prices*, Vol. I, p. 67. Chicago: The University of Chicago Press, 1931.

⁵ Warren, G. F., and Pearson, F. A., *op. cit.*, p. 292.

There is an important distinction between devaluation as it has usually occurred in the past and as it occurred in the United States in 1934. Historically, devaluation of currencies has taken place under one of the following conditions: (1) either the government was faced with inadequate revenues for the support of its operations or (2) prices had risen to such levels that they could not be supported with the currency at its previous relation to gold. The first of these conditions has often developed during wars when government expenditures have been greatly increased; the second has developed when an inflation has raised the level of prices to substantially higher levels than before, and has held them there for some time. If the currency of the country were to be reestablished on gold at the former parity, a drastic decline in prices would be likely to ensue. Rather than permit this, the government may choose to reestablish the currency at a lower parity with gold, thereby making it possible for a given amount of gold to support a larger number of currency units.

In contrast to these conditions, devaluation of the dollar was undertaken for the purpose of first establishing and then maintaining a given level of prices. The distinction between these instances of devaluation is, that formerly the process was used to sustain a level of prices, while dollar devaluation was directed toward raising the level of prices. Once it became clear that devaluation was not likely to raise prices immediately, the policy was still found useful in supporting the credit inflation required to finance a series of Treasury deficits.

One may well ask why money is considered to have any relation to gold during a period of devaluation such as the recent past. The reason is that world treasuries have continued to purchase gold, albeit at varying prices, expressing by this action a relation between their currencies and gold. As long as these purchases continue to be made, the currencies of the countries making the purchases will be related through the prices which the countries pay for gold. Also, gold has been used in the United States as the reserve of the currency and of the deposit credit of the banking system. The increases in nominal value growing out of devaluation have afforded a means whereby the money supply can be greatly increased at some later date. Thus, while the traditional operation of the gold standard is no longer retained, gold is still

significant because it helps to determine the potential money supply of the country.

Credit institutions and the money supply. — Extensive variations in the supply of money have been permitted in the past by changes in the efficiency of credit institutions. These changes have enabled larger amounts of credit to be extended on a given monetary reserve. The most important of these developments have been:

1. The expansion and improvement of the system of check clearance.
2. The setting up of central banks where none had existed, with an attendant decline in the amount of reserves required to be held.
3. The substitution of bank credit for currency where such credit required a small reserve of specie.
4. The increased use of the gold exchange standard.
5. The elimination of the coinage of gold and its recall from circulation and the substitution of the gold bullion standard for the gold coin standard.

The experience of the United States affords the best available example of the first two developments. The clumsy and ineffective clearing process which developed under the national banking system has already been described. It will be remembered that banks found it necessary, under this banking system, to hold very high reserves because of the low degree to which cancellation of checks occurred in the clearing process. Furthermore, the clearing system forced the maintenance of very high reserves because there was no central place where reserves could be stored for clearance purposes or for loans in periods of stringency. In other words, no bank of last resort existed, which could temporarily suspend the legal requirements in times of strain and lend to those who needed accommodation. The result of these two conditions was that many of our banks maintained deposits for clearing purposes in a number of places. Also, the amount of float under this plan was inordinately large, and this led to large cash holdings and an unsatisfactory reserve position.

The passage of the Federal Reserve Act improved the situation previously described (1) by centralizing the reserves of the country by permitting the discount of member bank paper and the rediscount of their customer's paper, and (2) by enabling the unit

banks to clear checks with greater speed and lower cost. The first of these improvements enabled banks to lend a greater part of their cash without fear of being required to redeem their deposits, as they could now replenish their cash by loans at the Federal Reserve banks. Moreover, banks which had previously been required to hold cash or deposits with other banks equal to from 15 to 25 per cent of their deposits, depending upon the size of the city in which they were located, could now hold reserves as low as 13, 10, and 7 per cent of their demand deposits and still operate within the law. However, under the new regulations, they were not allowed to include their vault cash, as was the case under the older law, so that the gain in reserves was somewhat less than was indicated by the lower reserve requirements.

Despite an expanded national income,⁶ the expansion under this new system of check collection, reserve organization, and reserve requirements was so much greater than before that some writers have attributed to it the high level of prices which was maintained in the United States after the World War. Whether or not one subscribes to this point of view, it has been estimated that the money value of the national income was \$33,400,000,000 in 1913 and \$84,100,000,000 in 1928. Doubtless a considerable part of the funds with which this expansion was financed grew out of the changes in central banking incident to the establishment of the Federal Reserve System.

Previous chapters have already shown that in England and the United States there has been a trend toward a greater use of credit at the expense of hand-to-hand currency. This change has also increased the supply of funds available, due in part to the lower reserves which have been required for credit than for currency. The Federal Reserve banks are required to maintain reserves in gold (gold certificates at the present time) or lawful money equal to 35 per cent of their deposit liabilities and 40 per cent of their notes outstanding. Since the member banks hold reserves equal to about 20 per cent of their deposits and the Federal Reserve banks hold 35 per cent against deposits, it is apparent that reserves of 7 per cent (20 per cent of 35 per cent) are held against deposits, compared with the 40 per cent which must be held against notes.

⁶ See, for example, C. A. Phillips, T. F. McManus, and R. W. Nelson, *Banking and the Business Cycle*, p. 21 et seq. New York: The Macmillan Co., 1937.

This substitution of credit for notes has not added greatly to our money supply in recent years, since it had already been carried to a high level both here and in England before the World War. In the United States, outside currency equalled about 23 per cent of deposits in 1890; then a steady decline ensued until 1918 when currency was 10 per cent of deposits. Since 1918, a further decline has been in progress, at times reaching as low as 7 per cent. In England, notes were 17.4 per cent of deposits in 1925 and 14.6 per cent in 1930.⁷ Because of the method of computation, these figures are not strictly comparable, but they indicate that the previous rapid trend toward substitution of bank credit for currency has proceeded about as far as can be expected under present banking conditions.

In Chapter II, it was shown that the gold exchange standard enables two countries to use the same gold as a reserve for notes and deposits. This is possible because a country using the gold exchange standard redeems its money with drafts on another country where the gold coin or gold bullion standard is in operation. While most countries employing the gold exchange standard do not permit exclusive use of foreign exchange, frequently permitting one-fourth of the redemption in gold, still the fact that the same gold is employed by both countries makes possible the expansion of the world money supply to considerably greater heights than could have been possible before the use of the gold exchange standard. The breakdown of international currencies and international confidence has reversed the trend toward using this method of money organization; today it is not used as a means of increasing the supply of money.

Another important method by which the central banks have secured gold in the past two decades has been by substituting notes of the central bank for the gold coin which had previously been used by the public.⁸ This substitution has been made possible by the growth of public confidence in the issues of central banks and by the adoption of the gold bullion standard by countries that returned to gold after having been forced to restrict specie payments during the period of the war. Substitution of notes for gold

⁷ See J. W. Angell, *The Behavior of Money*, pp. 16-17.

⁸ Table 34 shows that the return of gold from circulation since 1931 has amounted to more than \$350,000,000.

will, of course, be of decreasing importance in the future when the gold in the hands of the public has been reduced to a minimum.

Adoption of the gold standard. — Chapter X, The Monetary Experiences of the United States, has shown that the latter part of the nineteenth century was marked by the widespread adoption of the gold standard in place of the bimetallic standard. This demonetization of silver caused a decline in silver prices and, at the same time, placed a premium on gold. As gold was absorbed by treasuries and banks in the years that followed, the amount of gold available in any one country for the support of its money was reduced. When this fact is considered in conjunction with the rapidly advancing production of goods and services, it can be seen that the supply of gold was declining compared to the supply of goods, even though the absolute amount of gold was increasing. Thus, the more general adoption of the gold standard tended to reduce the relative supply of money which is in direct contrast to the measures previously reviewed.

THE SUPPLY OF IRREDEEMABLE MONEY

The conditions which have led countries to discontinue the redemption of their money in gold have been fairly uniform, but the subsequent effects of the action have been uniquely related to the peculiar setting in each country which has found it necessary to restrict specie payments. To be specific, a number of these conditioning factors may be cited: The most violent period of German inflation was colored by the despair and political and economic disorganization which followed the assessment of enormous reparation claims against the country; the war period of German inflation was permitted because of the belief that a victory for the German armies would make it possible to levy all war costs against the defeated nations; the English wartime restriction of gold payments was accompanied by arrangements for the support of sterling at a figure slightly less than the former par, since a stable money was required for the support of English foreign trade. Thus, policy with respect to expansion of the money supply which will be feasible for one country will not necessarily be appropriate to the conditions in another.

Entirely apart from the question of economic conditions, it is possible for one country to find its people less opposed than others

to the dangerous policies of inflation. For example, it is said that in France before its military collapse in 1940, French politicians faced a difficult dilemma because part of the population rigorously opposed higher taxes while another part steadfastly refused to permit inflation because of a poignant memory of the previous period of high prices. The opposite psychological condition would likewise be possible where a people would complacently allow the adoption of inflationary measures because they had not known the injustices and hardships which attend rapidly rising prices.

One further statement is necessary before the discussion of monetary expansion can proceed. When the level of prices is advancing under the stimulus of new supplies of money created for the account of the government, the demand for more money is not a demand in the sense that more of the circulating medium is required to carry on the transfer of goods and claims. The government increases the supply of money in order to purchase supplies and pay its employees and not in order to provide additional money because it is required by trade.

The monetary requirements for inflation. — As the term inflation is used here, it denotes a violent upward movement of prices induced by a rapid expansion of the supply of money. Many other conditions are frequently characterized as inflation or inflationary with perfect justification since the term has no single definition among students of money.

Ignoring for the moment the reasons for a sudden increase in the supply of money, two paths have been followed in the past in bringing about such increases: (1) The reserve requirements on the central bank, and occasionally on the private commercial banks, have been waived or suspended in order to allow an increase in bank deposits or notes or both to take place, and (2) the printing of notes without specie reserves.

The first of these is usually employed before the second since it represents a less serious departure from the normal operation of a money system. Waiving of reserve requirements on banks makes possible the creation of balances to the account of the government without fear of impairing the reserve position of the banks. But in the matter of creating balances for the account of the government, it is necessary to distinguish between the private commercial banks and the central bank. The former are under no obligation

to purchase government bonds unless they choose to do so, while the central bank is usually more or less intimately related to government finance through its service as a fiscal agent. Frequently, the central bank has been forced to absorb the treasury deficit without being permitted a choice.

Where the use of credit expansion as a fiscal device is superseded by the issuance of paper money, it is usually for a combination of two reasons: (1) The bonds of the government are salable only at higher and higher rates of interest, leading to a still greater need for balances to pay interest charges, and (2) the creation of bank balances and their dissemination through the economy brings a demand for larger quantities of hand-to-hand currency. Once the indiscriminate printing of paper money is initiated, the inflation reaches its more violent forms: the greater quantity of money available raises prices rapidly, forcing the government to create still larger quantities in order to obtain the goods and services it requires. In general, the culmination of this spiral has come either when the exigencies which caused it to be started have passed or when the disruption of the economy is so complete that greater immediate gains can be secured by stabilization of the money system than by further creation of money supplies.

The economic requirements for inflation. — Economic conditions have usually been at the root of changes in the relation of currencies to metallic reserves. Statesmen do not operate in a world of purely political considerations, dissociated from the economic life of the country. Much of their planning is considered successful if they are able to produce favorable economic conditions or to convince the public that they are responsible for the favorable economic conditions which exist.

One of the rarest of the conditions leading to inflation is exemplified by Russia where, it has been stated, the paper money was employed deliberately as the surest and most effective method of eliminating the middle-class property owners. Since inflation from the standpoint of economics is mainly a violent redistribution of the wealth and income of a society, it is clear why inflation should have been chosen for such a purpose.

The specific economic conditions which have preceded the development of inflation are a high level of business activity so that unemployed resources could not be drawn into production, a

stoppage of gold exports which hampers the transfer of capital to foreign points of refuge, and a rising stock market which indicates a willingness on the part of the public to employ balances in bidding for investments rather than holding them idle. The achievement of these conditions usually requires a period of several years, and if at the end of this time the political factors indicated below are still operating, the level of prices usually advances at an increasing rate.

Political requirements for inflation. — The political condition usually associated with inflation is a state of war, requiring the expenditure of vast sums for military purposes. When these expenditures are added to private disbursements, and particularly when the conditions enumerated in the above paragraph are present, the level of prices is likely to rise rapidly. The government attempts to increase its revenues by the imposition of higher tax rates, but the revenue from these sources increases less rapidly than the need for funds. The gap between the income and expenditure is filled, first by the sale of bonds through credit creation, and then by the use of paper money.

The effects of this process are usually apparent even at the time they are taking place. The government may levy much higher tax rates in the effort to stem the inflation, but the extent to which it will employ such tactics is a matter of judgment. Higher taxes and commensurately lower balances available for consumption purposes are unpopular. They may impair the morale of the country to such a degree that military defeat follows. Yet the use of monetary expansion also reduces the availability of consumption goods and differs from high taxes in doing so indirectly.

Although all countries at war have used both monetary expansion and taxes to finance themselves, they have differed in the degree to which they have relied upon one compared to the other. In general, those countries which have been able to secure the greatest part of their funds from taxes have suffered least from inflation.

The incidence of inflation. — The effects of inflation bear with unequal pressure upon the several classes of income receivers. The reduction in the real income of any individual is determined by the rate of rise in the cost of living compared to the rate of rise in his money income. For a company, the burden is determined by the relative rates of rise in its money costs and its money income. The

most probable general effect upon the various income classes is that unskilled labor suffers less than the skilled, the middle class suffers most, while certain members of the wealthier classes gain, although this generalization cannot be applied to all members of the highest income groups.

The German inflation affords numerous illustrations of these statements. Between 1914 and the peak of the inflation in December 1923, unskilled workers lost 37 per cent of their command over goods, compared to 44 per cent lost by skilled workers and 60 per cent lost by government officials. The rise in the prices of stocks was so much less than the rise in the cost of living that a stockholder selling his securities in 1923 could buy only 21 per cent as much with the money secured as he could have bought with the funds invested in 1914. The prices of bonds remained close to par for most of the period of inflation which meant that bondholders selling at the peak of prices lost virtually everything they had invested.⁹

The effects of inflation on any given company are determined by the type of industry in which the company operates. Banks and insurance companies fare somewhat better than the average concern since they simply receive money and pay out money. The policyholders of insurance companies who receive payment during an inflation period lose heavily, however, since their money will buy much less of goods and services. Railways and public utilities are very adversely affected since the selling prices of their services are established by commissions which adjust rates upward much less rapidly than the rise in the costs of providing the services. Manufacturing companies usually enjoy a fictitious prosperity since the value of goods rises while the goods are being fabricated. However, these windfall profits have often led companies into uneconomic investments which have proven valueless after the return to lower prices.

Conclusion. — It has been the purpose of this chapter to outline the methods by which the supply of money may be increased. Some of these methods have been of international importance, for they have served to raise the potential level of prices everywhere;

⁹ For a discussion of the German inflation, see Kemmerer, Edwin W., *Money*, pp. 271-318. New York: The Macmillan Company, 1935. The data cited above are computed from figures appearing on page 291 of this work.

others have been used by individual countries when economic and political events have made currency manipulation appear attractive to the governments concerned. While all of these methods of increasing the quantity of money are present at all times, it must be remembered that their availability does not mean that they will be used except in extraordinary situations.

No evaluations have been presented in this material, that is, we have not said that a country should not choose certain of these methods and forego others, on the ground that some will be more effective than others. Rather it has been shown that the circumstances which have led to the adoption of the more disruptive methods have been extreme and, in some instances, currency depreciation might have been the only way to accomplish a desired course. From the point of view of one who is using his knowledge of money and banking for the interpretation of current conditions, it is better to point out that given results follow given actions instead of saying that one action is bad and the other is good.

Finally, while the sources of increased supplies of money have been outlined, these increases await a demand for money from either or both of two sources, namely, business or government. They do not occur automatically. The next chapter will show the way that these groups of borrowers influence the money supply.

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CHAPTER XXIII

THE DEMAND FOR MONEY

Introduction. — The preceding chapter showed the manner in which the supply of money might be increased and the forces which play an important part in the changes continuously occurring in its volume. It will be remembered that some of the more important forces are:

1. The level of costs in the mining of gold.
2. Changes in banking institutions which facilitate the expansion of credit.
3. Changes in legal requirements, which either lower the reserves required for the money supply or sever the connection with a metallic reserve, thus removing most legal limitations. With regard to this force, the chief limitation that has prevailed in the past has been one of political expediency.
4. Evolutionary changes in the banking system.

Although certain elements in the analysis of the demand for money have been fairly commonplace for many years, a number of aspects of this subject have been treated much more fully in recent literature. Therefore, the following discussion, in its more technical phases, will follow the foremost of these treatments, Professor J. M. Keynes' *General Theory of Employment, Interest, and Money*.¹ Since the systematic argument of this treatise will be discussed later, only those parts of the work which relate to the demand for money will be discussed here. As a preliminary to the examination of these matters, it is necessary to understand the term "expectations."

Expectations. — The term "expectations" may, broadly speaking, be identified with the more general phrase, "the state of confidence." The important point is that, entirely apart from the yield of investments, fluctuations in the desire of the public to hold investments occur as the public alters its view of prospective yields, prices, taxes, etc. When individuals attempt to predict changes in these factors over a period of time, they are likely to project pre-

¹ See chapters 12 and 15. New York: Harcourt, Brace and Co., 1936.

vailing conditions into the future and, more or less, assume that future conditions will resemble the present.

Partly on the basis of its anticipation of the future conditions of investment, proximately in securities and ultimately in capital goods, the public chooses the proportion of its resources which it will hold as money, and the proportion which is to represent its other resources. If the future yield of investments appears relatively uncertain compared to the past, then investors will require a higher yield than before to compensate for the new prospective risks.

A different way of viewing this phenomenon is to assume two separate periods in which the real and money yields of investments are the same, and yet in which the state of expectations differs. If the state of expectations is relatively high in one period, there will be a number of investors willing to invest in enterprises that will require a long period for the return of the capital plus the going rate of interest. In the other period in which the state of expectations is relatively low, few, if any, investors will be willing to accept such long-term opportunities, and investment will be concentrated in enterprises which promise an early return of capital and interest.

As an illustration of this, the degree of optimism required for investment in transcontinental American railways long in advance of a demand for the services sufficient to pay the prevailing interest rate may be compared with the degree of optimism required for investment in machinery which is expected to pay for itself in five years. At times, the public's attitude toward the future leads it to bid vigorously for securities based upon long-term ventures and, at other times, to spurn all but the shortest-term investments.

THE DEMAND FOR MONEY

Keynes, in his examination of the motives for holding money, or, in his terms, the liquidity motives, distinguishes four of them: (1) the income motive, (2) the business motive, (3) the precautionary motive, and (4) the speculative motive. At any given time, the public holds a certain amount of currency and deposits to satisfy its desire for liquid resources. If all four of these motives are simultaneously in operation, some part of these liquid resources may be assumed to be held in satisfaction of each of the above

motives. Perhaps the individual in making these decisions will think only of the aggregate balance which he holds, although this will be the composite result of a number of motives.

The income motive. — One reason for holding money is to bridge the period between the receipt of income and its disbursement. The chief determinant of the amount of cash held in satisfaction of this motive is the interval at which payments are made. The manner in which payments to an individual affect his holdings of funds may be illustrated by assuming two individuals, one of whom receives a monthly income of \$200, payable at the end of each month, while the other receives the same amount in weekly payments of \$50. If we assume that the money is spent in both cases for consumption and is divided into even expenditures throughout the respective periods, the first individual will be required to hold an average cash balance of \$100. He will spend \$6.33 $\frac{1}{3}$ per day and after half the month has elapsed, he will have a balance of \$100, which will be diminished through the remainder of the period by similar amounts until the time for the receipt of his next payment, at which moment his balance will have fallen to zero. The second individual, spending in a similar manner, will release one-seventh of his cash each day but in doing so will maintain an average cash position of \$25. It is apparent, then, that the manner in which payments are made is one determinant of the consumer's demand for cash; the fewer the number of payments during a year, the larger his holdings of cash must be. Hence the demand for money to hold depends, in part, on the prevailing state of expectations and, in part, on such factors as frequency of wage payments, clearings, etc.

The business motive. — The business motive is similar to the income motive; it is determined by the failure of cash receipts and cash disbursements to cancel one another within each payment period. This motive leads to smaller holdings of cash and deposits when the level of national income falls and when the number of business units producing the income decreases. For example, if a merger of two firms producing complementary products occurs, the demand for cash balances may decline to less than half the amount held by the two firms. Consolidations of firms on a large scale will therefore effect a reduction in the strength of the business motive for holding cash balances.

The precautionary motive. — If the balances held in satisfaction of the two motives discussed above invariably achieve a cancellation of receipts and disbursements, there will be no precautionary motive. But there is always the possibility that unforeseen events requiring sudden expenditures may upset the customary pattern. For the consumer, it may be illness or a temporary interruption of employment; for businesses, losses due to breakdowns or property damage.

“The strength of all these three motives partly depends upon the cheapness and reliability of methods of obtaining cash.”² If credit is available at favorable rates of interest and if there is no danger that it will cease to be available, the public and business may find it desirable to reduce their balances, and borrow when the need arises.

The speculative motive. — Keynes says of this motive that it “needs a more detailed examination than the others, both because it is less well understood and because it is particularly important in transmitting the effects of a *change* in the quantity of money.”³

While the former three motives are normal in the sense that they will result from the general activity of the economy and the level of money income, this is not true of the speculative motive. Keynes believes this motive to be closely associated with the level of the rate of interest. In a given state of expectations, “*uncertainty* as to the future course of the rate of interest is the sole intelligible explanation of the type of liquidity preference . . . which leads to the holding of cash M_2 .”⁴ The cash M_2 is the amount held in satisfaction of the speculative motive.

It is not the absolute level of the rate of interest that matters, however; it is the divergence of this rate from the rate that is considered safe. As the rate falls toward the minimum level that is considered safe, the risks of holding things other than money increase, and current returns from investment fall. Therefore, there is less income available with which to offset losses on capital account. Suppose, for example, that a perpetual bond, carrying a 4 per cent coupon, is selling for \$100 when the state of expectations dictates 2 per cent as a safe rate. There will be no reason, other than that

² Keynes, J. M., *General Theory of Employment, Interest, and Money*, p. 196. New York: Harcourt, Brace and Co., 1936.

³ *Ibid.*, p. 196.

⁴ *Ibid.*, p. 201.

attributable to any of the previously discussed motives, for holding cash or balances.

If the yield on the security or on real assets such as capital goods should fall below the safe level, or if the state of expectations should fall so that a higher rate were required to induce investment, a different result would follow. Such circumstances would promote a marked rise in the volume of cash and balances required to satisfy the speculative motive. Keynes believes that under these conditions the demand for liquidity would be so great that any volume of balances would be preferred to any form of investment.

This thesis affords an interesting insight into the holding of balances in the United States in recent years. Despite enormous imports of gold and the growing volume of deposits fostered by government borrowing, there has been only a small volume of investment in capital goods. If the above analysis is valid, there must be a rise in the yield on investments or a rise in the state of expectations before any large-scale purchases of capital assets can take place. The willingness of individuals to hold balances in preference to other assets is observable in the fact that, if they were not willing to hold cash, they could employ it to buy the government bonds which the banks have absorbed.

Keynes cites two recent examples of extremes in the desire for liquidity. At the one extreme is the inflation in Central Europe and in Russia after the war when the public could not be induced to hold money on any terms since it was losing value so rapidly. At the opposite extreme is the situation in the United States in 1932, when people could hardly be induced to part with cash on any terms.

Summary. — Of the four motives which prompt the public to hold cash balances, the income, business, and precautionary motives underlie the reasons for ordinary holding of bank deposits and cash. The speculative motive is a substitute term for what is more commonly called hoarding, but with one important distinction. Where the term "hoarding" is employed to distinguish cash held in anticipation of better investment opportunities, the theory of the speculative motive attempts an answer to the question, What determines the *amount* to be held? These determinants have been stated to be a function of the state of expectations and the rate of interest.

A different view of these relationships may be obtained by con-

sidering a condition in which the quantity of money is fixed and in which a sudden strengthening of the speculative motive is developed. This condition would require a transfer of balances (psychologically speaking) from the other categories to the speculative balances, and a consequent fall in the money income of the people. The rate of interest would therefore rise to a level which would stabilize the quantities of cash held in satisfaction of the first three motives, and the quantity held to satisfy the speculative motive.

Since it has been stated in the previous chapter that the demand for money is one of the forces which determine changes in supply, the influence of the motives which determine demand may be considered from this point of view. When income first begins to expand after a depression, certain individuals increase their disbursements more rapidly than their money incomes increase. These disbursements may be made from balances previously held for speculative purposes, or they may be covered by new credits created by the banks. In the first stages of recovery, the former is typically the case. The disbursement of these balances to other holders will change the attitude of the recipients toward investment and may likewise reduce the strength of their speculative motive. Changes of expectation and the accompanying changes of income will require larger balances for income and business reasons.

The general rise in the yield on assets creates a demand for additional balances with which new assets may be acquired. This situation leads to a demand for bank credit and hence to an increase in the money supply. The new conditions will warrant the payment of the interest required by the banks. Therefore the rise in the supply of money comes about through the desire of a number of individuals and firms to have their disbursements exceed their receipts. The higher level of income under the new conditions will likewise dictate larger income and business balances.

In the long run, the demand for money is increased by an increase in population. This factor multiplies the number of necessary transfers of goods and may also increase the number of firms that will require balances.

PRICES AND PRICE CHANGES

In this chapter and the preceding one, it has been shown that the money supply in existence at any moment is made up of an

actual supply which is the result of the composite demand for it and a potential supply which may come into existence in response to an increased demand. Most important of the circumstances which cause this potential supply to come into existence are changes in business and public demand for money as income increases, and as their motives for desiring liquidity vary. This is not to deny, of course, that if the demand were fixed, the money supply could be increased by a sudden change in the circumstances out of which the money supply is produced. There still remains, however, the task of making an effective synthesis from which we can draw tentative conclusions concerning the causes of the changes in the price level, which has been our problem through the last four chapters. If the discussion which has preceded is to be useful in laying a foundation for the interpretation of price changes, we must now turn our attention to the actual changes that have occurred during the last forty years, and examine some of the reasons for these changes. In doing this, it is possible to employ a number of classifications, the most useful of which are related to short-term and long-term changes in prices. In the first class, those variations of the price level which are associated with the business cycle may be included; the second comprises secular trends of prices, such as occurred from 1873 to 1896, from 1896 to 1920, and from 1920 to 1933. None of these situations has been explained in a way that is completely satisfactory to all students of money, whose explanations vary according to their theories of money value. Since the discussion that has been presented has been a combination of several views, a number of the analyses of those price changes can be selected without departing from the theory presented above.

Price trend, 1896-1914. — From 1873 to 1896, the trend of world prices was downward, so that by the end of the period, the price level was as low as it had been for a century. Many writers have attributed the advancing level during the years following 1896 to the discovery and increased mining of gold; since several important discoveries had occurred either just prior to or at the beginning of this era. After the period of comparative stability in gold production, from 1882 to 1888, world production rose from a level of about 6,000,000 fine ounces in 1889 to 14,800,000 fine ounces in 1899. While this was a small amount of gold compared with the amount already available in the monetary reserves of the central

banks, it aided in relieving a dearth created by the widespread adoption of the gold standard during the preceding thirty years. The supply of money was also supplemented by the development of deposit banking in the major countries, which further raised the potential level of this supply.

While the growth of trade was creating additional demands upon the money supply between 1896 and 1914, a large number of corporate mergers in the United States probably aided in the reduction of the volume of balances required to finance a given volume of trade. On the other hand, this growth of trade was leading to the creation of some of America's outstanding industries, creating a demand for further accommodation at the banks. On balance therefore, the growth of trade during these years led to a greater demand for money even though some economies in its use were possible.

The short price cycles of this period were remarkable for their comparatively small variations; no decline of as much as 10 per cent took place in the entire period, despite the fact that important business declines occurred in 1903, 1907, and 1908. This may be accounted for, at least in part, by the low level from which the trend started and the moderate rate of advance that was maintained. In fact, from the standpoint of the business cycle, those changes would not be designated as price cycles since the business cycle was dominated by accompanying changes in the realm of prices. Usually price cycles are marked by inventory accumulations or by a drying up of demand which forces price concessions from dealers in the hope of continuing the distribution of goods in somewhat the same volume. Since none of the cycles of this period was marked by inventory speculation, there was little reason to expect very much price reaction in the production cycles.

Price cycle, 1914-1920. — The discussion of changes in prices from 1914 to 1920 will be confined to the United States because it is believed that the United States during these years affords one of the best examples of price variations available. By 1920, our prices had risen to about 250 per cent of the level in 1913. This increase can be explained on the three following bases:

1. A large and active demand existed for goods by American consumers and businesses, by the American Government, and by foreign governments and businesses.

2. A rapid increase in the supply of money took place as a result of gold imports, and the expansion of the credit system.
3. Limitations upon the supply of goods occurred because of the reduction of the labor supply and the extraordinary demands of the war.

The first increases in demand for goods came from foreign governments and foreign business firms as the earlier entry of these countries into the World War caused them to suffer from inadequate supplies long before the United States had entered the conflict. The diversion of this demand to our markets began to have its effect upon American business as early as 1915, but purchases continued to increase from then until the end of the war. After the United States declared war in 1917, our government borrowed large sums and spent them for munitions and supplies. These expenditures, coupled with those from foreign sources, caused the demand for goods to rise rapidly, absorbing most of the unemployed capital and labor. As this demand continued to increase, the monetary incomes of individuals and business firms grew, increasing the total demand for goods. Thus the demand from the three sources named above created a situation which American industry was not prepared to handle so that a large part of the increased demand was diverted to increasing the level of prices.

The money supplies of the nation were augmented by imports of gold from the belligerent countries as well as by the embargo which was placed upon gold exports by the United States Government. Furthermore, since much of the credit expansion which occurred was at the request of the Treasury, the banks did not have to fear the depletion of reserves; they could expand believing that, in case it became necessary, the government would suspend reserve requirements or take other steps to aid them. They, too, were victims of the tide of the times and set no standard on loans except that they were an aid in winning the war. When an active demand for loans exists under such conditions, it is possible for the banking system to create credit virtually up to the limit of its reserves.

The third factor which created the rapid rise in prices during the war period was the advance of production to the limits of capacity. While the capital of American industry had been increasing for some time, the combined demands stated above were in excess of anything that had been required before. These demands, plus the

withdrawal of large numbers of men for military duty, soon exhausted the supply of idle labor which, in the final analysis, constitutes the most effective limit to production. In addition to the absorption of idle labor, there was a tendency to increase the hours of labor per week. When production has risen to such limits, it is apparent that further increases in the demand for goods can be compensated only by increases in the general level of prices. Under conditions such as these, price changes are usually most rapid and violent, that is, the spread between the various prices becomes wider than usual. In this instance, the spread was widened by the war demand which was concentrated on a limited group of commodities.

Price cycle, 1920-1929. — Few conditions exist under which the price structure changes with as great rapidity as that which has just been described. Under most circumstances, the movement of prices has been less rapid and less severe; such were the variations which marked the period after the war, with the exception of the deflation following the inordinate expansion. After a sharp decline in 1920 and 1921, prices settled down to a series of moderate variations around a level, which was about 50 per cent above the prewar level. In no instance did these changes from year to year exceed 6 per cent; they developed in a pattern which conformed closely to the business cycles of the period. Prices and business volumes advanced from 1921 to 1923, declined from 1923 to 1924, increased thereafter until 1926, and again declined in 1927. Business volumes advanced until 1929, but the trend of prices was downward from 1926 to 1933. The small price changes during the 1920's may be attributed to several conditions: (1) The inventory speculation of the previous period of advancing prices had taught businessmen the hazards of heavy accumulations of commodities; (2) the banking system adopted an easy money policy in an attempt to support the price level; and (3) technological development was very rapid, so that a slowly declining price level could be accomplished without disruption of the customary cost-price-profits pattern. The country thus enjoyed one of its longest periods of price stability. However, this stability was deceptive in that it concealed forces which later were completely to disorganize our economic and social life. If certain prices had fallen more than they did, the results would have been less disruptive.

Price trend, 1929-1933. — The statement of Mills affords a good summary of the influences present in the fall of prices from 1929-1933. He asserts that

The causes of a general price decline are seldom open to precise definition. A general break in prices may be initiated by minor and obscure factors, when the structure of prices is weak. Certain factors contributing to the recent collapse of world prices may be defined in general terms, but no attempt is made to indicate their relative importance, or to set forth the exact combination of circumstances that precipitated the decline. In this account we deal in the main with world conditions, for the price recession in the United States was but a phase of a world-wide decline.

During the first post-War decade facilities for the production of foodstuffs and major raw materials were overdeveloped, relatively to the opportunities for sale through existing markets at the prices necessary to cover costs and yield satisfactory profits. Resulting price weakness was in part concealed, because of the influence of ample credit (which facilitated the application of valorization schemes) and of heavy foreign lending to raw material producing countries. The maintenance of consumer demand in the United States through the development of new credit instruments and the presence of non-recurring elements of income (notably speculative profits) served also to support expenditures and prices prior to 1929. Heavy international lending, at rates that declined up to 1928, helped to maintain buying power and stimulated the shouldering of excessively heavy financial obligations by raw material producing countries. The check to lending to debtor countries, which was first felt in 1928, and the increased difficulty of securing credit, placed such countries in serious straits. Domestic expenditures were reduced, many valorization schemes had to be abandoned, and the service of foreign debts became difficult. The forced selling in foreign markets of the major products of these debtor countries (raw materials, primarily) weakened the markets, and prices of important staples fell.

The usual instruments for the correction of such a situation (a correction made in pre-War years through the gold standard and international credit mechanisms under conditions of relatively free trade) were ineffective, partly because of the lack of highly developed financial institutions in most debtor countries, partly because of the faulty working of the post-War gold standard when creditor countries were unwilling to receive goods, partly because of the very magnitude of the difficulties involved.

Reduced buying by debtor countries contributed to a drop in production and employment in industrial countries. This situation was aggravated by the reduction of domestic purchasing power in the United States as speculative profits turned to losses with the ending of the boom in securities. . . .

The gold situation intensified the movements due to these conditions. The general resumption of the gold standard in the middle years of the post-War decade led to an increased demand for the existing stocks of gold. The resulting demand upon the gold supply was accentuated by a world distribution of gold

that was disproportionate to the world's commercial and financial needs. There is no clear evidence of pressure upon prices from the monetary side prior to 1929, but there appears to have been no great margin of gold supply above the world's needs, under the existing banking conditions.⁵

<i>Factor</i>	<i>1896-1914 Increase in prices</i>	<i>1914-1920 Increase in prices</i>	<i>1921-1929 Stable prices</i>	<i>1929-1933 Decrease in prices</i>
Supply	Gold production increased, Industrial mergers improved velocity.	Gold embargo, Gold imports, Credit expansion for account of government and business.	Abundant funds through gold imports, Exchange velocity outside New York increased from 27 to 41, World maldistribution of the gold supply.	Decline of gold standard, Increase of private hoarding, Rapid decline in velocity of money.
Demand	Growing production created business demand for bank credit.	Government borrowing, Business borrowing, Public consumption high, High monetary velocity.	Large business demand for capital expansion, Balanced cost-price structure, Consumer demand supported from speculative profits.	Lower profits reduced business demand, International shifts because of fear.
Nonmonetary		Limitations on productive capacity so that price increases followed each increase in demand.	Technology expanded volume of goods, Valorization schemes for the stabilization of raw materials.	Dumping of raw materials, Abandonment of price maintenance schemes.
Psychological		Patriotic and optimistic spirit.	Speculative spirit, New era psychology.	Bewilderment and extreme uncertainty.

Mills measures the decline from 1929 to 1933 as a fall of 48 per cent in the general level of commodity prices, with prices of raw materials declining considerably more than prices of manufactured goods.

Summary. — This survey of price changes during the periods of recent history may be summarized in terms of the theory of money

⁵ Mills, F. C., *Prices in Recession and Recovery*, pp. 6-8, New York: The National Bureau of Economic Research, 1936, *passim*.

elaborated in the last four chapters. The four general sources from which price changes have been shown to emanate were (1) the supply of money, (2) the demand for money, (3) nonmonetary changes such as technological innovations, the level of output, and industrial mergers, and (4) the public's attitude with respect to liquidity.

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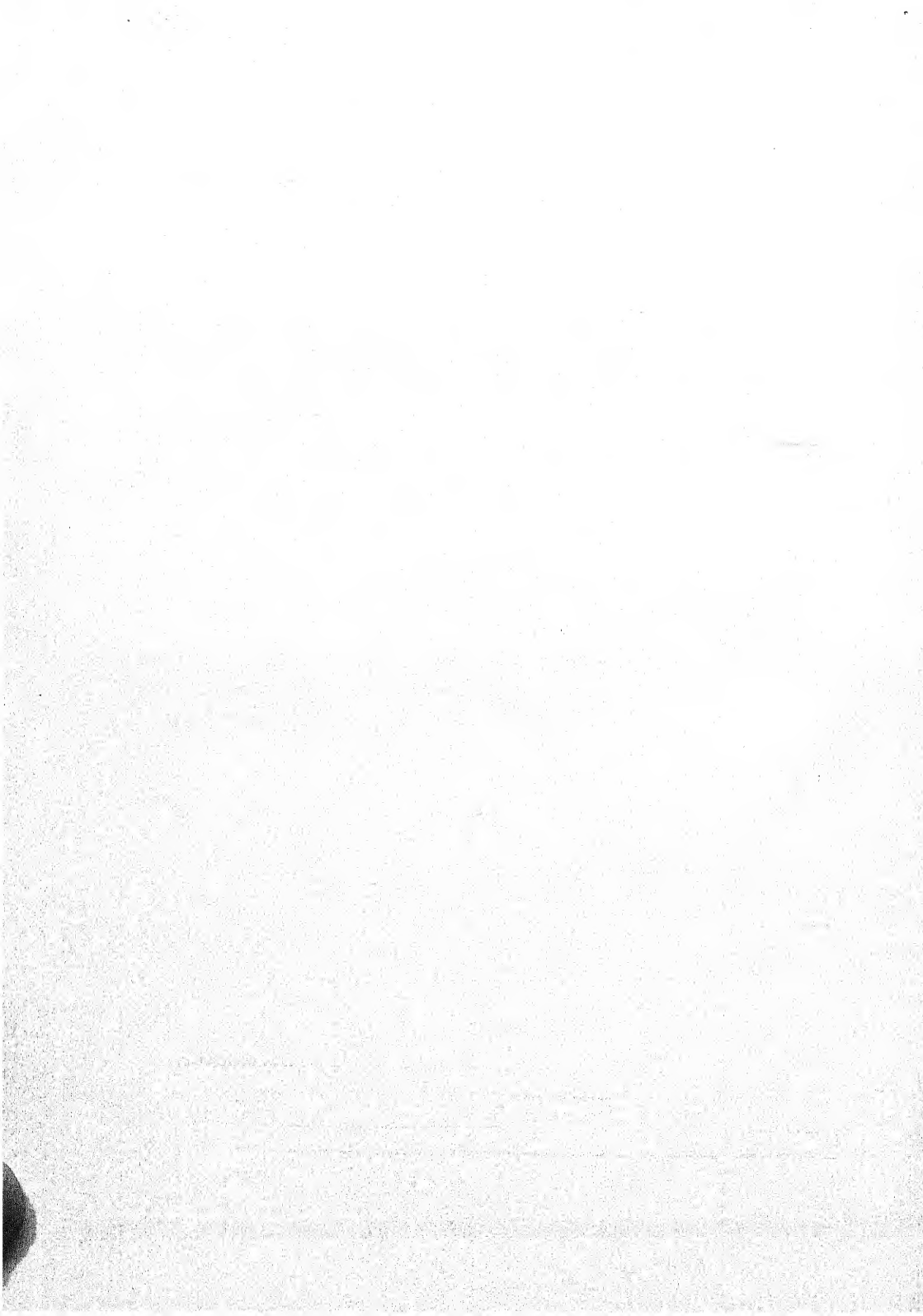
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PART SIX

THE CONTROL OF THE MONEY MARKET



CHAPTER XXIV

ORGANIZATION OF THE MONEY MARKET IN THE UNITED STATES

Introduction. — In its broadest sense the term “money market” is used to denote all of the available facilities for borrowing and lending funds. The money market of the United States is an unorganized market in that there is no central trading place, such as is provided by The Chicago Board of Trade for trading in grain or by the New York Stock Exchange for trading in securities. Any transaction involving the transfer of loanable funds, wherever consummated, may be said to have taken place in one of the many parts of the money market. Frequently, however, one of the smaller markets which has no geographical bounds nor a particular geographical area, but which is equipped with a great diversity of facilities for handling funds, is designated as “the money market.” For example, to many people this term means only the market for short-term funds; to others it means only the New York money market. In more accurate usage, however, the general term includes the market for long-term as well as short-term funds and the customers’ loan market of every village, town, and small city, as well as the so-called “open market” of such metropolitan areas as New York City.

Classification of specific money markets. — Since the purpose of this chapter is to describe the organization and operation of certain specific money markets or certain sections and phases of the general money market of the United States, it is necessary to classify these more limited markets. They may be classified as “the market for short-term funds” and “the market for long-term funds.” Another possible classification arises from the distinction between a customers’ market and an open market for loanable funds. These two classifications are not mutually exclusive since both the open market and the customers’ market include facilities for making short- and long-term loans.

The customers' market has already been treated as adequately as the scope of this text permits, especially in Chapter X. Some consideration has also been given to the open market, since commercial banks are the largest buyers of open-market paper of both long- and short-term maturities, which transactions have entered into our description of the banking process. It is our present task, therefore, to describe briefly the organization and operation of the so-called open market for loanable funds. In this chapter only minor attention is given to the market for long-term funds because this text does not pretend to treat adequately the whole field of investment banking, and considerable attention is given elsewhere to the participation of commercial banks in the market for government securities.

Organization of the open market for short-term loans. — The market for short-term funds is one of the most thoroughly organized and most sensitive markets in modern economic society. A complex network of financial institutions which deal in loanable funds of short maturities covers the entire country and reaches out to all the financial centers of the world. These institutions provide the facilities for accumulating the shiftable funds of the country and making them available to willing borrowers everywhere. Because of the high degree of development of a system of wire transfers, the time factor in the shiftable of these funds is practically eliminated, so that demands for funds originating in one section of the country are immediately met by idle balances forthcoming from distant and widespread areas.

Despite the high degree of organization and standardization of the market for short-term loanable funds, wide variations in money rates characterize this market. It is not unusual for the rate on one short-term loan to be 1 per cent, while other loans are being made for $\frac{1}{2}$ of 1 per cent and 2 per cent, or more. The explanation of this phenomenon is not to be found in a lack of organization of the market, but rather in the fact that it is sensitive to the wide divergences in the needs of both borrowers and lenders and to the conditions under which they operate. The needs of a borrower and the conditions under which he operates induce or force him to enter one market where his operations affect the money rates prevailing therein, while the conditions which face a lender induce him to offer funds in another market. The short-term money market must

be flexible and sensitive if it is to reflect the composite conditions that face the borrowers and the lenders of the funds in which it deals.

As a result of a long period of development, the market for short-term funds is centered around facilities for dealing in the following types of paper:

1. Commercial paper, i.e., the promissory notes of borrowers which are sold in the open market.
2. Bankers' acceptances, i.e., time drafts drawn on and accepted by banks.
3. New York Stock Exchange collateral loans, including both call and time loans with security collateral.
4. United States Government short-term loans, known as treasury notes and certificates of indebtedness.

Other short-term paper, or paper with intermediate maturities, such as finance company paper which is secured by instalment receivables and the comparatively short-term loans made to farmers by certain government agencies, are discussed in Chapters XVIII and XIX.

THE MARKET FOR COMMERCIAL PAPER

Definition of commercial paper. — The term commercial paper has been used indiscriminately in the parlance of the money market. It is used sometimes to describe all transactions which are not investment in character. Another definition which may be called the legal definition, limits the use of the term to obligations arising from productive, commercial transactions. A third definition, which is adopted for use in this chapter, defines commercial paper as the short-term promissory notes of business firms which are offered for sale in the general financial market.

Origins of the commercial paper house. — The modern commercial paper house is an outgrowth of the operations of note brokers who responded to a definite economic need in the early years of the nineteenth century. These note brokers took advantage of the opportunity of acting as middlemen for merchants and traders who could not obtain adequate credit accommodations in their home communities. The banks of these communities, particularly at certain seasons of the year, could not extend all the credit that

businessmen needed. Since it was often impossible or inconvenient for these businessmen personally to arrange for loans from banks in other areas, the note brokers, for a commission, would undertake to find lenders or buyers for their notes and bills. The note brokers, as their name implies, did not purchase or guarantee the notes and bills which they handled; they acted merely as intermediaries between borrowers and lenders. In the event of an inability on the part of the note brokers to find buyers for particular notes, they would return them to the borrower.

Gradually, as trade and commerce grew in volume and reached out to areas more distant from the financial centers, the commercial paper house, with its more elaborate organization, superseded the note brokers in the performance of the important function of bringing the suppliers of short-term funds into contact with persons or business firms that needed funds.

Some commercial paper houses assumed functions which the earlier note brokers did not or could not assume. One of these functions was the outright purchase of certain issues of commercial paper. In other words, they became merchants or *dealers* in commercial paper. They also served as financial advisers to their borrowing customers. These activities may be regarded as banking functions. More recently, however, many commercial paper houses have reverted to the older practice and become once again mere brokers of commercial paper.

Thus the marketing of commercial paper in the United States has passed through three stages, namely, (1) the developmental period when note brokers performed only relatively simple functions, (2) the rise of the commercial paper house to a position of great prominence in our financial system, reaching a peak in 1920, and (3) the period of decline in the volume of commercial paper since 1920. Some of the relationships between commercial paper houses and the borrowers and lenders with whom they deal will be described in the following paragraphs and some causes of the decline in the volume of their operations will be indicated.

Classes of paper handled by dealers. — The promissory notes of business firms which are offered for sale in the open market may be classified on one basis as single-name and double-name paper and on another basis, as secured and unsecured paper. The term single-name paper refers to those promissory notes which bear the

indorsement of the maker only. Practically all commercial paper is of this type; only a few notes of new borrowers in the open market bear two indorsements. Ordinarily this single-name paper is made payable to "ourselves," rather than to the order of the commercial paper house, and is indorsed by the maker. It is therefore unnecessary for the commercial paper house to attach its indorsement in order to negotiate it. Thus the commercial paper house has no legal responsibility in connection with the paper it handles, unless it purchases such paper outright. It may, however, have a moral responsibility of offering for sale to prospective buyers only such paper as will be paid at maturity, or the responsibility of aiding the buyer to collect as much as possible in the event of the default of the maker of any instrument it has handled.

Most of the instruments handled by dealers are not only single-name paper, but are unsecured as well. A few collateral trust notes issued by finance companies and notes secured by stocks, bonds, and warehouse receipts have been handled by some dealers. In most cases, then, the buyers of commercial paper rely solely upon the financial strength of the lender or maker.

The denominations for which commercial paper is drawn depend largely on the size of the borrowing firms and the size of the operations of prospective buyers of it. The \$5,000 denomination is the most common and the \$2,500 and \$10,000 denominations are the next most common in number of instruments sold. Most commercial paper has a definite maturity date, which is usually six months from the date of issue.

Requisites for borrowing in the open market. — Since the vast majority of promissory notes sold in the open market are single-name, unsecured notes, it follows that the makers must be good credit risks. Small business firms cannot sell their notes in the market because their credit standing is not well known, and they do not need sufficient amounts to justify the work which a commercial paper house must do in order to put the paper out in the market. It has been estimated that the average open market borrowings per concern must exceed \$200,000 to be profitable. Many commercial paper houses dislike to handle paper of less than this amount.¹

¹ Greef, Albert O., *The Commercial Paper House in the United States*, p. 237. Cambridge: Harvard University Press, 1938.

In addition to the size factor, the commercial paper house must consider numerous other factors in arriving at a decision concerning the credit risk of a prospective borrower in the open market. Among these are the following:

1. The use to which the funds will be applied, whether for current operations or for investment purposes.
2. The current position of the prospective borrower.
3. The earnings record of the company in relation to total volume of business, capital, investment, etc.
4. The type of product which the borrower handles, whether staple or not; whether the goods are subject to rapid price changes or not.
5. Whether the borrower is engaged in manufacturing or trading, rather than in the sale of services.

Advantages and disadvantages of open-market borrowing. —

Greef lists the following advantages of open-market financing from the point of view of the borrower:²

1. The cost of raising short-term capital in the open market is ordinarily less than that of borrowing from banks direct.
2. The ability to sell its notes through dealers in a market that is nation-wide gives a company a certain amount of bargaining power in dealing with its own banks.
3. If properly coordinated with direct borrowing from banks, open-market financing enables a borrowing concern to "clean up" its bank loans at more or less regular intervals.
4. It enables concerns whose own banks are unable to supply the full amount of their credit requirements to obtain the additional accommodations they need in a market that is nation-wide.
5. It is more convenient to borrow from banks indirectly through a single commercial paper house than to establish lines of credit with several banks in different parts of the country.
6. Open-market borrowers are able to obtain valuable financial advice from their dealers.
7. Companies which continually maintain a credit position strong enough to enable them to borrow through dealers acquire financial prestige and obtain favorable publicity

² Greef, Albert O., *The Commercial Paper House in the United States*, pp. 253-263. Cambridge: Harvard University Press, 1938.

in all sections of the country in which their notes are purchased.

8. A concern which, by selling its notes through dealers, has shown its ability to obtain unsecured short-term loans from banks in all sections of the country is in a favorable position for raising such long-term capital as it may require from time to time.

Among the alleged disadvantages of open-market borrowing, which Greef believes to be either "nonexistent or of little consequence," are the following:

1. A concern borrowing in the open market may become independent of its bankers, be deprived of their counsel, and consequently overexpand its business.
2. A company which borrows heavily in the market, to the neglect of proper banking connections, is almost certain to encounter financial difficulties in times of panic and uncertainty.
3. It is sometimes more convenient for borrowing concerns to deal directly with their local banks than with a commercial paper house.
4. Companies which borrow through commercial paper houses are subjected to the inconvenience and expense of answering innumerable credit inquiries from prospective and actual buyers of their paper, and to the possibility that their credit may be impaired by false rumors arising from such inquiries.
5. If a concern in any particular industry becomes financially embarrassed, country banks which have purchased substantial amounts of open-market obligations in the immediately preceding years will often refuse to buy paper issued by other concerns in the same industry.
6. Commercial paper houses interfere with the management of their borrowing customers' business.

Greef concludes his study of the commercial paper house in the United States with the following observation:

From the point of view of individual commercial banks the only important disadvantage of this system at present is that dealers enter into direct competition with them in advancing short-term loans to concerns with high credit standing. Strictly speaking, the competition in question is really not between dealers and banks, but, rather, between banks wishing to make direct loans to

borrowing concerns and those willing to make somewhat safer indirect advances to the same concerns at correspondingly lower rates. The ultimate lenders in the commercial paper market, in other words, are the commercial banks themselves, and no commercial paper can be sold to these banks which they are not willing of their own accord to purchase. . . . The conclusion seems warranted that the only important disadvantage of the open-market system of financing from the point of view of individual banks is greatly outweighed by its advantages to the banking system as a whole.³

Decline of the commercial paper business. — The war period in American finance was largely responsible for a very great increase in the volume of business of the commercial paper houses of the United States. The great expansion in business activity, accompanied by a marked increase in the price level, necessitated increased borrowing for working-capital purposes. Many firms exhausted their normal lines of credit at local banks and sought additional funds in the open market. The peak in the volume of commercial paper outstanding was reached in 1920, when the Federal Reserve Board reported \$1,296,000,000 outstanding at the end of January of that year. Since the average maturity of commercial paper is six months, it is estimated that the total volume of business handled by commercial paper dealers in 1920 was \$2,600,000,000. Table 36 shows the decline in the volume of commercial paper outstanding in recent years:

TABLE 36. COMMERCIAL PAPER OUTSTANDING, 1924-1939
(In millions of dollars)

Year	Amount at end of year	Year	Amount at end of year
1924.....	\$798	1932.....	\$ 81
1925.....	621	1933.....	109
1926.....	526	1934.....	166
1927.....	555	1935.....	172
1928.....	383	1936.....	215
1929.....	334	1937.....	279
1930.....	358	1938.....	187
1931.....	118	1939.....	210

Source: *Federal Reserve Bulletins*.

³ Greef, Albert O., *The Commercial Paper House in the United States*, pp. 413-414, *passim*. Reprinted by permission of the President and Fellows of Harvard College.

A complete analysis of the causes of the decline in the volume of commercial paper outstanding and the consequent retirement from business of many commercial paper houses in recent years would necessitate analyzing the changes in the whole financial system of the United States. This statement suggests that the basic causes of this decline are to be found in changing methods of financing business operations in the postwar as compared with the prewar years. It suggests, furthermore, that the decline in general business activity is not the cause of the decline in the volume of commercial paper outstanding. Table 36 reveals that the volume of commercial paper declined in a period of great business activity, namely 1928 and 1929. The decline in business activity can explain the abnormally low volume of commercial paper in 1932, but it does not explain the trend from 1920 to 1938.

Among the factors responsible for the decline in the business of commercial paper houses, the following seem to be most important:

1. Many business firms, especially the larger ones, replaced short-term loans with long-term securities, being enabled to do so by the ease of raising capital in the security markets in the same period.
2. The consolidation of smaller banks with larger ones and the affiliation of banks with branch, chain, and group banking systems enabled business firms to get what short-term credit they needed from a single banking organization.
3. The decline in the level of prices encouraged a hand-to-mouth policy with respect to purchases of raw materials, and discouraged borrowing for working-capital purposes.
4. The business unit grew to such proportions that it could take advantage of other methods of obtaining needed working capital. Moreover, the large firm often finds it possible to adjust dividends, costs, prices, etc. so as to make short-term loans unnecessary.
5. The equalization of money rates in different sections of the country was promoted by the Federal Reserve System and the federal government.

Thus the decline of the commercial paper business is a reflection of basic changes in the operation of the whole financial system of the United States.

THE MARKET FOR BANKERS' ACCEPTANCES

The origin of the acceptance house. — Even before the origin of the commercial bank as we know it today, some of the large English mercantile houses were acting as banks do today in accepting drafts drawn against them. Their financial standing was known in all the large trading centers of the world, while that of the small firm was not so widely known. These small mercantile firms frequently encountered difficulties in buying goods on credit from distant suppliers. In return for commissions, the small firms would make arrangements with the large ones whereby the latter would agree to accept drafts drawn against them. Some of these large firms gave up their trading activities and specialized in the business of accepting bills, thereby becoming acceptance houses, whose function it was to guarantee payment of bills at maturity. The acceptance houses of London played an important part in the development of world trade and commerce.

The acceptance dealers (in London they are called bill brokers) of today act as middlemen between the accepting institution, usually a well-known bank, and the buyers of acceptance paper. They relieve the accepting bank, unless it purchases its own acceptances, of discounting and investing in bills which it has accepted. Thus the acceptor, rather than the dealer, performs the function of guaranteeing the payment of bills at maturity.

The acceptance market in the United States. — As has been stated in a previous chapter, most bankers' acceptances arise in foreign trade. An importer arranges with his bank for a letter of credit under which the bank obligates itself to accept drafts up to a certain amount. Under authority of this letter of credit, a foreign bank, acting for the exporter, draws a draft against, let us say, the New York bank which issued the letter of credit to an American importer. This draft when accepted by the New York bank becomes a bankers' acceptance.

Before the establishment of the Federal Reserve System, national banks were not permitted to accept bills drawn against them. The development of the acceptance market in the United States, therefore, grew up with the Reserve system and has depended upon the support of the Federal Reserve banks throughout its history.

The Federal Reserve banks and the market for acceptances. — The

framers of the Federal Reserve Act wished to develop a broad acceptance market in the United States. Accordingly, a provision was inserted in that act which permitted member banks to accept drafts drawn against them. This provision removed an obstacle to the creation of a market for acceptances, but it did not constitute a positive action toward the development of such a market. However, positive action was taken by the Federal Reserve banks with such measures as would lead to the conclusion that the extent of the development of the market for acceptances in the United States is attributable, in large part, to Federal Reserve policy. Among these measures, the following are most important: (1) The outright purchases of acceptances by the Federal Reserve banks at rates announced by those banks. (2) The purchase of acceptances by the Reserve banks under resale agreements.

1. *The acceptance rate.* — If the discount market is to function properly, there must be a buyer or group of buyers ready at all times to buy the available supply of acceptances. Since the American business community had not been accustomed, prior to the establishment of the Federal Reserve System, to the using of bankers' acceptances, the Federal Reserve banks offered to buy any quantity of them at their quoted buying rates. Thus the Federal Reserve banks established themselves as an overflow market for acceptances, so that dealers may now choose to sell to them when other outlets do not absorb the entire supply. The Reserve banks may, if they wish, take the initiative in buying and selling acceptances in the open market, but they have seldom done this. They have preferred merely to exert their influence upon the market by changing their buying rate in the light of the general conditions of the money market and their attitude toward the credit situation as it changes from time to time. When acceptances have come into the possession of the Reserve banks on the initiative of the dealers, the Reserve banks have seldom exerted an influence on the market by selling them before maturity; they have chosen rather to hold them until maturity.

The rates of discount at which acceptances sell in the money market follow very closely the buying rate at the Reserve banks. There may be times, however, when the market rate is lower than the Reserve banks' buying rate. This disparity in rates is most likely to occur when the supply of funds in the possession of banks

is very large. The banks then bid a high price for acceptances (a low rate of discount on them), assuming that alternative channels for the investment of bank funds are not much, if any, more attractive from the point of view of yield. The market discount rate cannot, for any length of time, be higher than the buying rate at the Reserve banks, since dealers would, in this situation, offer acceptances to the Reserve banks until the market supply declined and the market rate fell to approximately the level of the Reserve banks' buying rate. It follows, therefore, that the Federal Reserve banks can support the market for acceptances by keeping their buying rate somewhat below the market rate, since this policy will allow dealers to quote high prices for acceptances. In other words, the offerors can always sell their bills at relatively low rates of discount, a factor which is advantageous to those business firms that finance their transactions by the acceptance method. As a matter of fact, it has been the policy of the Federal Reserve banks to keep the buying rate low so as to encourage the development of the acceptance market in the United States. This policy differs from the prevailing policy in England, where the Bank of England maintains a rate above the market and purchases acceptances at a rate which usually entails a loss to the seller. The result has been that the Federal Reserve banks in the United States have held, except in periods when member banks have a plethora of funds to invest, a very large percentage of the total acceptances outstanding.

2. *Resale agreements.* — The policy of the Federal Reserve banks in maintaining bill rates below the market rates has made it necessary to protect dealers against losses on the paper which they handle. Herein lies the significance of the difference between the policy which prevails in England and that which prevails in the United States. In England, the bill brokers resort to the Bank of England only in emergency situations, whereas in the United States the Reserve banks protect the dealers against loss at all times. The process by which the dealer is protected against loss through a resale agreement is as follows: The dealer enters into a written contract of sale with a Reserve bank, according to which the dealer is obligated to repurchase the bills at face value within a stipulated period of time not to exceed ninety days. The Reserve bank under the resale agreement usually charges the dealer a rate equal to its buying rate on the shorter maturities. In this manner, the dealer who has pur-

chased bills may procure a loan on his portfolio, at a low rate, with no risk to himself.

The Federal Reserve banks may use these repurchase agreements as a means of increasing or decreasing the supply of money they make available to the money market. When they are willing to make new repurchase agreements in greater quantity than old ones are maturing, the supply of funds available to the money market is increased, while the opposite situation results in a withdrawal of reserve funds from the market.

Call loans on bankers' acceptances. — The support which the Federal Reserve banks have given to the market for acceptances has made it unnecessary, except in a few instances, for dealers to obtain funds in the open market to carry their portfolios during the marketing period. In the absence of the repurchase agreements that have been mentioned, the dealers might use their portfolios as collateral for loans as they do in England. It has long been the custom of the bill brokers in London to use their acceptances as collateral for call loans at the English joint stock banks. If it becomes necessary for these banks to call their loans, the bill brokers can always obtain funds to meet the demands by discounting their acceptances at the Bank of England. They will not do this unless it is absolutely necessary, however, because they must pay a penalty rate at the Bank of England, that is, a rate above the market rate.

In the United States, banks must buy bankers' acceptances in competition with the Reserve banks. They ordinarily make outright purchases of them, rather than make loans to dealers with acceptances as collateral. In a few instances, however, the latter method is used.

There has accordingly in recent years grown up, particularly in New York City, a special call money market against bank acceptances as collateral, the rate being somewhat below the call money rate on loans secured by other collateral. This rate, moreover, is relatively stable as the requirements for this type of call loan do not fluctuate to any great extent with the volume of transactions in security markets. Banks and banking institutions therefore who may not be purchasers of bills but who may, nevertheless, have sizable sums of money available only for a very short time for use in the bill market can utilize this phase of the open discount market for the employment of such funds.⁴

⁴ Fry, Morton H., *Bank Acceptances as an Investment*, p. 15. From one of a series of pamphlets published by the American Acceptance Council.

The accepting institutions. — The larger member banks of the Federal Reserve System are the most important of the accepting institutions. They derive authority from the Federal Reserve Act to create acceptances to an amount, at any one time, equal to not more than one-half of their capital stock and surplus, or to the full amount of their capital and surplus with the permission of the Board of Governors. In addition to the member banks, a few private banking firms and American agencies of foreign banks create acceptances.

The acceptance dealers. — A small number of financial institutions in New York City purchase outright practically all of the bankers' acceptances that are created by the accepting institutions. These dealers derive their profit by selling the bills at a slightly higher price, usually less than $\frac{1}{4}$ of 1 per cent above the buying rate. Some acceptances, namely, those sold to the Federal Reserve banks, must bear the dealer's indorsement, while others do not bear such indorsement unless a purchaser requests it. The dealers ordinarily keep in touch with prospective buyers by means of a daily offering sheet which gives the name of the accepting banks, denominations, maturities, and other information which the buyers must have in order to make their choices.

The purchasers of acceptances. — The member banks of the Federal Reserve System are the largest purchasers of acceptances, as well as the largest acceptors of drafts. Insurance companies and other financial institutions are also large buyers at times. The distribution of bankers' acceptances depends largely on prevailing market conditions and the credit outlook. In periods of low money rates, banks hold many of their own acceptances and seek to increase their holdings by open-market purchases of supplies from other sources. In periods of high money rates, when banks have numerous alternatives for the employment of their funds, acceptance dealers cannot sell them to banks but must find other buyers or sell their bills to the Federal Reserve banks, when such action becomes necessary to dispose of the available supply.

Acceptances to create dollar exchange. — A method of drawing drafts in the absence of an actual shipment of goods is used by bankers in certain countries, especially those of Central America and South America, where exports are of a highly seasonal character. The banks of the United States, under strict regulations of the Board of

Governors of the Federal Reserve System, may accept these drafts and obtain payment from the proceeds of the sale of merchandise to importers in the United States during the exporting season of the foreign country. By this procedure, dollar balances are created in periods when the exports of the foreign country are low in volume.

The volume of bankers' acceptances. — Table 37 indicates the growing tendency for banks to hold their own acceptances, a practice to which some objections might be raised. Obviously, a bank fails to submit its acceptances to a market test when it purchases its own acceptances. Furthermore, a bank which adopts this policy supports its own credit and, for this reason, the practice is discouraged by Federal Reserve authorities. This table further indicates the absence of the reserve banks in the market for acceptances in recent years of extremely low money rates.

THE MARKET FOR CALL AND TIME LOANS ON SECURITY COLLATERAL

Introduction. — The market for loans secured by stocks and bonds may be broadly or narrowly defined. In its broad sense, this market includes all loans of any lender to any borrower, secured by stocks and bonds. In its narrow sense, the loans secured by stocks and bonds are collateral loans to brokers and dealers in securities on a call-loan or a time-loan basis. Under the broadest meaning of the term, this market is one of the most diversified and unorganized of the short-term money markets, while in its narrowest sense, the reference is to the New York Stock Exchange collateral loan market, which is the most centralized and one of the most highly organized of the short-term money markets. Although this discussion of the market for loans secured by stocks and bonds is primarily concerned with loans to brokers and dealers in securities, the entire field is presented for brief description.

Lenders in the collateral loan market. — In recent years, commercial banks have been almost the only lenders in the collateral loan market. In times past, however, lenders other than bankers have exerted considerable influence in this market. In periods of very high money rates and great demand for funds for speculative purposes, 1929 for example, the so-called brokers' loans for the

TABLE 37. DOLLAR ACCEPTANCES OUTSTANDING, 1924-1939
(In millions of dollars)

End of month or year	Total outstanding	By Holders				By Classes					
		Held by accepting banks		Held by Federal Reserve banks		Held by others	Based on imports into U. S.	Based on exports from U. S.	Dollar exchange	Based on goods stored or shipped between points	
		Own bills	Bills bought	For own acc't	For foreign acc't					In U. S.	Foreign countries
1924	821	.....	.....	387	43	.....	292	305	23	200	.....
1925	774	38	55	372	70	239	311	297	19	129	17
1926	755	35	42	378	59	241	284	261	26	145	40
1927	1,081	58	47	390	229	356	313	391	28	218	131
1928	1,284	27	49	488	325	396	316	497	39	190	243
1929	1,732	59	132	391	548	603	383	524	76	308	441
1930	1,556	90	282	328	439	417	221	415	52	306	561
1931	974	131	131	305	251	156	159	222	31	267	296
1932	710	224	380	4	41	62	79	164	10	230	228
1933	764	223	219	127	4	190	94	207	4	277	182
1934	543	243	254	.....	1	46	89	140	2	103	119
1935	397	183	185	.....	.....	29	107	94	2	110	84
1936	373	151	164	.....	.....	57	126	86	2	83	76
1937	343	147	131	.....	2	63	117	87	2	78	59
1938	270	121	91	.....	.....	58	95	60	3	57	56
1939	233	105	70	.....	.....	57	103	39	16	54	22

Source: *Annual Report of the Board of Governors*, 1937, p. 156; *Federal Reserve Bulletin*, June 1940, p. 566.

account of others reached tremendous proportions. The most important lenders were corporations which deposited part of their large cash balances with New York banks, with instructions to lend them at the money desk of the New York Stock Exchange. In 1931, the New York Clearing House Association prohibited its members from handling brokers' loans for the account of others, and two years later the Banking Act of 1933 prohibited all member banks from acting as agents for others (that is, lenders other than banking institutions) in making loans on securities to brokers and dealers in securities. We are chiefly concerned, therefore, with commercial banks as the lenders in this particular market for short-term funds.

Borrowers in the collateral loan market. — The Member Bank Call Report, which is issued three or four times a year by the Board of Governors of the Federal Reserve System, classifies loans for purchasing or carrying securities, exclusive of loans to banks, as follows: (1) to brokers and dealers and (2) to others. Although this source of data on loans of this type is the most comprehensive, it is not the most frequently published. The New York Stock Exchange publishes monthly figures on collateral loans of its members. In these reports are given the volume of both time and demand loans with security collateral made (1) by New York banks and trust companies and (2) by private bankers, brokers, foreign bank agencies, and others in New York City. Still more frequent are the weekly reports on loans to brokers and dealers in securities made by banks in one hundred and one leading cities which show the volume of these loans made by New York banks and by banks outside New York City. The classification followed in succeeding paragraphs is that found in the Member Bank Call Reports.

Collateral loans by banks to others. — This category is not the same as brokers' loans for the account of others. The interdictions of the New York Clearing House Association in 1931 and the Banking Act of 1933 do not apply to loans made by banks to brokers, or to loans, secured by stocks and bonds, made by banks to other customers. "Collateral loans by banks to others" are customers' loans rather than open-market loans — they are made to customers of banks other than brokers. This segment of the collateral loan market is not an organized market; it is rather a personal market in which each transaction is the result of an agreement between a loan officer of a bank and the customer.

The purposes for which bank customers borrow on their promissory notes secured by stocks and bonds are many. A very general classification includes: (1) loans for business purposes, (2) loans for consumption purposes, and (3) loans for carrying securities. Since these loans involve personal relationships between bankers and their customers, it is of course impossible to know exactly what use is made of the funds obtained through these collateral loans. It is a fair assumption, however, that the borrower's credit standing is such that the banker feels that he needs some security, that the borrower has exceeded his normal line of credit at the bank, or that the credit standing of the borrower is not definitely known.

Table 38 reveals the volume of this class of loans as compared with member loans to brokers and dealers for purchasing or carrying securities.

TABLE 38. MEMBER BANK LOANS FOR PURCHASING OR CARRYING SECURITIES

(In millions of dollars)

	<i>To brokers and dealers</i>	<i>To others</i>
1939, December 31.....	\$2,463	\$7,685
1933, June 30.....	953	3,752
1938, June 30.....	701	2,614
December 31.....	973	775
1939, March 29.....	838	733
June 30.....	731	736
October 2.....	.....	.....
December 30.....	790	700
1940, June 29.....	447	668

Source: *Federal Reserve Bulletin*, June 1940, p. 560.

Loans to brokers and dealers. — The classification of loans for purchasing or carrying securities includes: (1) loans by New York banks to brokers and dealers in that city, (2) loans of funds deposited with New York banks by interior banks to dealers and brokers in New York City, and (3) loans to brokers and dealers outside New York City. Some of these lenders prefer to make loans on a call-loan basis and others on a time-loan basis. They generally prefer the call-loan method because it makes possible a more immediate withdrawal of their funds. At times, however, the lender is willing to

leave his funds in the market for a stated period of time because he knows definitely in advance when he needs the funds in question. At other times, he may anticipate a fall in money rates and, therefore, be willing to make commitments at the present rate. In periods of anticipated rise in money rates, the call-loan basis of lending would seem to be preferable to the lender. The position of the borrower, as far as changes in money rates are concerned, would logically be the opposite of that of the lender.

Brokers borrow in the call loan market to obtain funds for the benefit of their customers who purchase securities on a margin. Margin is defined as the percentage of the market price which the purchaser deposits with the broker in the form of cash or other securities. For example, the buyer of United States Steel Common at \$60 a share might deposit \$2,400 with the broker on a 100-share purchase transaction and allow the broker to use the shares he purchases as security for a call loan. It is said in this case that the margin is 40 per cent.

The New York Stock Exchange furnishes facilities to bring the borrowers and lenders together to consummate call and time loans with security collateral. One of the peculiar features of this market is that the amount of funds supplied to it by banks is determined after the transactions which give rise to the demand for funds are completed. Ordinarily the reverse is true of most loans for industrial and agricultural purposes. Most enterprisers in these fields make arrangements for the needed funds in advance of the transactions into which they enter.

Banks become involved in the brokers' loan market in two ways, namely, through middlemen called loan brokers, and by lending funds directly to brokers and dealers in securities. The operations of loan brokers may be described briefly as follows: On the floor of the New York Stock Exchange is the so-called money desk, which is presided over by a loan expert who is under the general supervision of the exchange. He receives memoranda of the amounts which members wish to borrow and the rates which they are willing to pay. The loan brokers who represent New York banks may be willing to advance funds at this rate and, if so, that rate is posted as the market rate. Thus the money desk records the amounts demanded and the amounts offered, and posts the rates agreed upon.

When a loan broker places a loan, he notifies the bank for which he is acting of the amount loaned, the name of the borrower, and the rate agreed upon. The securities which the borrower offers as collateral are placed in an envelope by him, and on the envelope are written his name and a list of the securities it contains. The borrower also signs an agreement and a note giving the lending bank authority to sell the securities in case of default, and a lien on whatever credit balance the borrower may have on deposit with the lending bank.

The advantage to the bank of making its loans through a loan broker is that it may through him choose the borrowers. The loan broker attempts to make large loans to a few of the best borrowers and thus reduce the overhead cost to the bank handling brokers' loans. When a bank lends funds at the money desk of the New York Stock Exchange it cannot choose its borrowers in this manner.

Banks make direct advances to stock brokers through what is called the day loan. Since a stock broker cannot forecast exactly the needs which arise for any day, his cashier estimates such needs as accurately as possible and arranges for a day loan which is ordinarily sufficient to enable him to purchase securities during the day. These are then used to collateralize an overnight loan. No charge was made on these day loans until 1929, when a rate of 1 per cent per annum was established.

The amount of a broker's bank balance need not, of course, equal the amount of the securities he purchases during a day. In fact, the value of securities handled may be more than a thousand times the average cash balance of the broker who handles them. This is explained, in part, by the fact that brokers buy and sell among themselves the same securities each day as their customers direct, and they need not make settlement for each transaction.

The Stock Clearing Corporation, a subsidiary of the New York Stock Exchange, provides the machinery whereby settlements for each transaction are obviated. It eliminates delivery to intermediate purchasers and provides instead for delivery only to the final purchaser. In other words, it performs for brokers the function which a clearing-house association performs for commercial banks. From 1929 to 1935, brokers made cash settlements on from only 18 to 32 per cent of the total value of their transactions. In years of

great activity in the stock market this percentage is, of course, lower than in dull years. This fact emphasizes the importance of the function of banks in the settlement process, namely, that of supporting with a comparatively small amount of funds a much larger structure of transactions.

Call- and time-loan rates. — The reader's attention has been called to the distinction between call loans and time loans on security collateral. These two kinds of loans are identical with regard to the type of collateral with which they are secured and with regard to borrowers and lenders. They differ only in the provision that call loans are not contracted for a definite period but are callable or payable on any business day at the option of either party to the transaction. The importance of this difference is, as might be expected, reflected in the difference in rates on the two types of loans. There are, however, two call-loan rates, namely, the rate on new loans and the renewal rate.

The volume of new loans on the floor of the stock exchange is usually a small percentage of the total call loans outstanding. If, however, no machinery is established to take care of renewals automatically, a lender on a call-loan basis calls his loan and makes a new one every time the call rate advances, while every borrower pays off his call loans and borrows anew every time the call rate is lowered. To avoid this confusion, a renewal rate is agreed upon daily, which rate applies to all loans held over from the previous day, unless the borrower and lender enter into some special agreement. The new loan rate applies only to those loans made on the current day, and might fluctuate hourly in response to changes in the demand for and the supply of funds. Because of the existence of the renewal rate, the call loans of some banks are not called for years, even for a decade or more in a few instances, while other banks make it a policy to call their call loans frequently. The policy usually followed by each of the New York banks is quite generally known among brokers. They know, too, that this difference in policy cannot always be relied on, especially in periods of financial stress and strain.

In recent years, the rate on stock exchange time loans for ninety days has been $\frac{1}{4}$ of 1 per cent above the renewal rate. This condition reflects a willingness on the part of banks to accept a smaller return in consideration of the right to call their funds on demand.

CHART II
OPEN-MARKET MONEY RATES

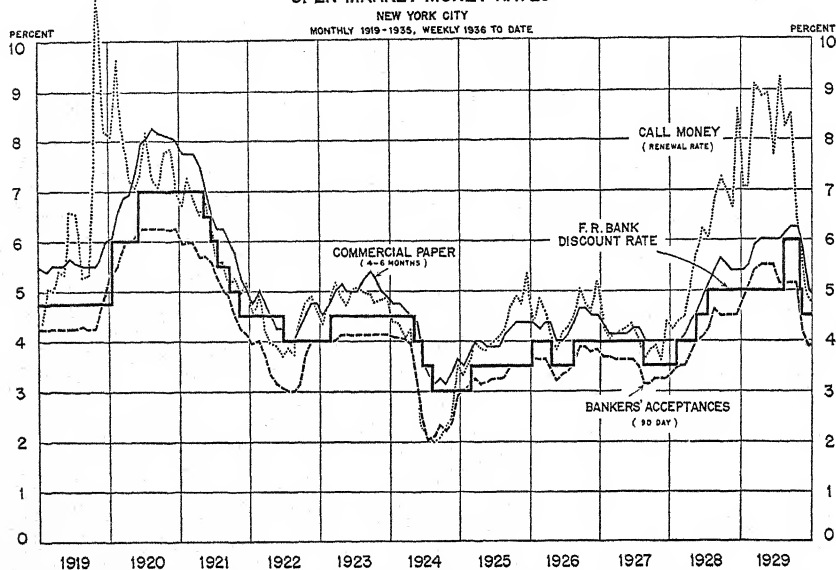
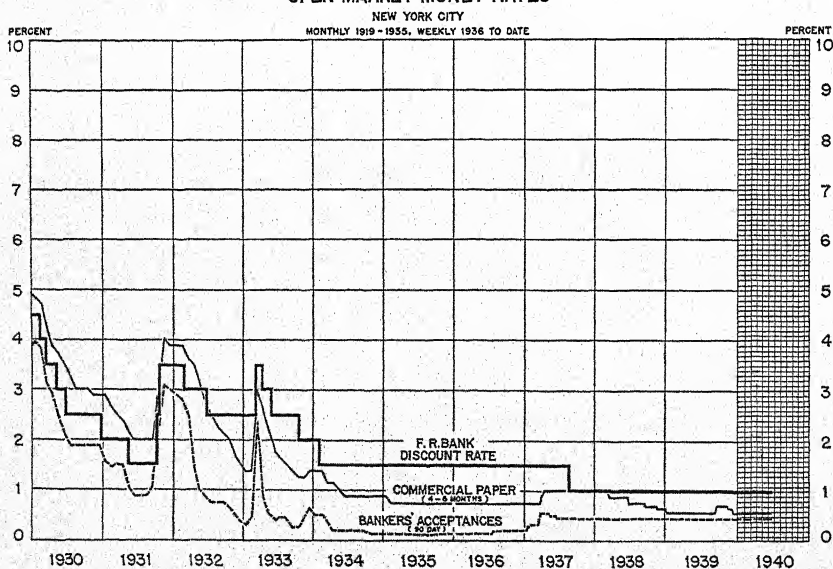


CHART II. (Continued)
OPEN-MARKET MONEY RATES



Source: Chart Book of the Board of Governors of the Federal Reserve System, pp. 18-19.

It would seem, therefore, that the callable feature has been of more value to the lenders than to the borrowers of these loans.

There has been a number of comparatively short periods, however, when the renewal rate on call loans has exceeded the rate on time loans with security collateral. One such period was the last quarter of 1919 when the call-loan rate was bid up to abnormally high levels. Again in March 1929, the call-loan rate was very high. These were periods when bank funds were absorbed by customers' demand to such an extent that banks could not supply the funds the call market demanded. The high rates, which were, in part, a consequence of this situation of scarcity of supply relative to demand, then attracted funds from nonbanking sources.

UNITED STATES CERTIFICATES OF INDEBTEDNESS, TREASURY BILLS, AND TREASURY NOTES

Certificates of indebtedness and Treasury bills. — The fifth division of the open market for loanable funds, which is described briefly in this chapter, is closely related to the capital markets. The Treasury of the United States frequently has a choice of raising funds through the issuance of long-term or of short-term obligations of the federal government. The short-term obligations it issues are Treasury bills and Treasury certificates of indebtedness. Both are direct obligations of the United States Government and have, until recently, been exempt from federal and state income taxes. Both have maturities of one year or less. They differ in one respect, namely, that Treasury bills bear no interest and are sold on a discount basis, while certificates of indebtedness are interest-bearing and are sold at the issuance price plus accrued interest.

The use of Treasury certificates of indebtedness was introduced as a means of meeting the temporary needs of the Treasury during the World War, when its need for funds was abnormally high, pending the collection of taxes and the flotation of long-term bond issues. In more recent years, the Treasury has turned to Treasury bills as an instrument of financing, presumably because of their greater flexibility. The use of certificates of indebtedness requires very accurate judgment on the part of the Treasury concerning the rate at which the market will absorb the full amount of an issue. The use of Treasury bills, on the other hand, require no such precise judgment. When the Treasury decides to issue bills it is assured of

the best possible terms, at that time, through the process of competitive bidding for them.

Treasury notes. — Another instrument which the Treasury has used in great volume in recent years is the Treasury note. The maturities on these are for the most part one to five years. One advantage of this type of instrument is that it meets with the favor of those prospective purchasers who fear that ultimately long-term government securities will sell at higher yields and that heavy losses will be sustained by their holders. These persons, who look forward to a rise in money rates although admitting that a sharp rise is not imminent, will purchase Treasury notes with maturities of from one to five years, since a modest rise in money rates, should it occur, would affect the capital value of near-by maturities less than that of distant maturities. From the point of view of the government, Treasury notes permit an adjustment to new market conditions with less disturbance to market prices than do long-term bonds, since most purchasers hold them to maturity or pledge them as security for credit advances rather than sell them at any sign of general market weakness. In other words, the Treasury runs the risk in issuing long-term bonds of a sharp rise in money rates and a consequent lowering of capital values, with the necessity for taking strong measures, through the Federal Reserve banks

TABLE 39. UNITED STATES GOVERNMENT DIRECT OBLIGATIONS HELD BY ALL MEMBER BANKS ON DECEMBER 30, 1939

(In thousands of dollars)

<i>Obligations</i>	<i>All member banks</i>	<i>Central reserve city member banks</i>	<i>Reserve city member banks</i>	<i>Country member banks</i>
Treasury bills	\$ 562,737	\$ 468,187	\$ 63,396	\$ 31,154
Treasury notes	2,223,277	973,092	819,404	430,881
Bonds maturing in 5 years or less	773,492	350,473	267,491	155,528
Bonds maturing in 5 to 10 years	3,017,960	1,043,685	1,311,395	662,880
Bonds maturing in 10 to 20 years	3,657,326	1,361,577	1,403,013	892,736
Bonds maturing after 20 years	949,403	601,949	357,358	261,304
Total	\$11,184,195	\$4,527,655	\$4,222,057	\$2,434,483

Source: *Member Bank Call Report for December 30, 1939.*

or otherwise, for supporting the market. The necessity for such support in the case of Treasury notes should not be so great, because the Treasury may soon refund them with new issues at higher yields, if necessary, thereby making a comparatively easy, although costly, adjustment to new market conditions.

TABLE 40. OPEN-MARKET RATES IN NEW YORK CITY

(Per cent per annum)

Year, month, or week	Prevailing rate * on —			Average rate on —			Average yield on U. S. Treasury 3-to-5 year notes
	Prime com- mercial paper, 4 to 6 months	Prime bankers' accept- ances, 90 days	Stock exchange time loans, 90 days	Stock exchange call loan renewals	U. S. Treas- ury bills		
					New issues offered within period †	91-day dealers' quotation	
1937 average. ....	.95	.43	1.25	1.00	.447	.28	1.40
1938 average. ....	.81	.44	1.25	1.00	.053	.07	.83
1939 average. ....	.59	.44	1.25	1.00	.022	.05	.59
1939 — May. ....	.56	.44	1.25	1.00	.006	.03	.42
June. ....	.56	.44	1.25	1.00	.006	.03	.39
July. ....	.56	.44	1.25	1.00	.017	.04	.45
Aug. ....	.56	.44	1.25	1.00	.046	.05	.48
Sept. ....	.69	.44	1.25	1.00	.102	.14	1.07
Oct. ....	.69	.44	1.25	1.00	.028	.05	.77
Nov. ....	.63	.44	1.25	1.00	.018	.05	.64
Dec. ....	.56	.44	1.25	1.00	.012	.04	.51
1940 — Jan. ....	.56	.44	1.25	1.00	.001	.01	.47
Feb. ....	.56	.44	1.25	1.00	.004	.02	.46
Mar. ....	.56	.44	1.25	1.00	(**)	.02	.42
April. ....	.56	.44	1.25	1.00	.003	.02	.45
May. ....	.56	.44	1.25	1.00	.042	.06	.65
Week ending:							
May 25.	$\frac{1}{2}-\frac{5}{8}$	$\frac{7}{16}$	$1\frac{1}{4}$	1.00	.067	.08	.77
June 1.	$\frac{1}{2}-\frac{5}{8}$	$\frac{7}{16}$	$1\frac{1}{4}$	1.00	.089	.10	.83
June 8.	$\frac{1}{2}-\frac{5}{8}$	$\frac{7}{16}$	$1\frac{1}{4}$	1.00	.118	.11	.84
June 15.	$\frac{1}{2}-\frac{5}{8}$	$\frac{7}{16}$	$1\frac{1}{4}$	1.00	.095	.12	.80
June 22.	$\frac{1}{2}-\frac{5}{8}$	$\frac{7}{16}$	$1\frac{1}{4}$	1.00	.046	.09	.72

Source: *Federal Reserve Bulletin*, July 1940, p. 701.

* Monthly figures are averages of weekly prevailing rates.

† Series comprises 273-day bills to October 15, 1937, bills maturing about March 16, 1938, from October 22, to December 10, 1937, and 91-day bills thereafter.

** Rate negative.

It is presumably for reasons such as those which have been mentioned that banks have been willing to purchase and the federal government has been willing to issue large quantities of Treasury notes in recent years. The volume of Treasury notes and bills held by member banks, compared with their holdings of United States government bonds, is indicated in Table 39.

MONEY RATES

Although no attempt will be made here to explain the causes of changes in open-market money rates, the reader should understand the rates which have prevailed in recent years on the instruments described in this chapter. From the high levels of 1929, money rates fell to unprecedented low levels in recent years, as is indicated in Table 40. In contrast to the very low rates revealed by this table, the following rates prevailed in March 1929: prime commercial paper, 4 to 6 months, 6 per cent; prime bankers acceptances, ninety days, $5\frac{1}{2}$ per cent; stock exchange ninety-day time loans, 8 per cent; the monthly average of stock exchange new call loans, 9.80 per cent; the monthly average of the stock exchange renewal call-loan rate, 9.10 per cent; the average yield on United States Treasury notes and certificates, 3 to 6 months, 4.60 per cent.

SUGGESTIONS FOR FURTHER READING

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CHAPTER XXV

GUIDES TO CENTRAL BANK POLICY

Introduction. — Students of banking frequently distinguish two types of situations in the development of central banks. In the first, such banks develop as private institutions and later assume the functions of central banks. Such was the case in England. In the second situation, which exists in the United States, the central banking system is superimposed on a commercial banking structure which has already been formed. Much of the theory of central banking operations was formulated in England before the advent of similar banking organizations in other countries. The history of central banks has been marked by a continual change in their functions and scope as economic organization has changed. In general, this change has been toward acquiring greater control over the economic system, through the instruments made available to the central banking authorities.

A summary of the duties of a central bank, as conceived at one time, is given by the testimony of the Governor of the Bank of England before the Royal Commission on Indian Currency and Finance. He said:

It should have the sole right of note issue; it should be the channel, and the sole channel, for the output and intake of legal tender currency. It should be the holder of all Government balances; the holder of all the reserves of the other banks and branches of banks in the country. It should be the agent, so to speak, through which the financial operations at home and abroad of the Government would be performed. It would further be the duty of a central bank to effect, so far as it could, suitable contraction and suitable expansion, in addition to aiming generally at stability, and to maintain stability within as well as without. When necessary it would be the ultimate source from which emergency credit might be obtained in the form of rediscounting of approved bills, or advances on approved short securities, or Government paper.¹

This statement of the functions of a central bank was made in 1926, after a long period in which these functions were debated

¹ Quoted by C. H. Kisch and W. A. Elkin in *Central Banks*, p. 100. New York: The Macmillan Company, 1928.

vigorously. It is typical of the statements of many careful students of banking who sought from time to time to arrive at a final judgment concerning the proper scope and aims of central banks. It is unlikely, however, that any of these statements of past years have presented a wholly true picture of the operations of central banks as those operations have developed after the statement concerning them was made; it is equally unlikely that a perfect forecast of future interpretations of the proper functions of any central bank can be made today. The statement which has been quoted, like many others which might have been quoted, raises a number of interesting questions. Four questions are singled out for discussion in this chapter and succeeding chapters: (1) What guides might be used by a central bank in exercising its powers of control over money, credit, and banking? (2) What instruments might a central bank use in attempting to achieve its aims? (3) How can the effects of the policies and operations of a central bank in the money market be analyzed? (4) What place might the Treasury occupy in the money market?

In discussing these questions, we shall be concerned chiefly with the policies and operations of the Federal Reserve System in the United States. Some attention, however, must be given to the experiences of the Bank of England since these experiences greatly aided the framers of the Federal Reserve Act in establishing a central banking system in the United States and gave to Federal Reserve authorities a vast stock of knowledge that was useful in formulating Federal Reserve policy.

EARLIER INTERPRETATIONS OF GUIDES TO CREDIT POLICY

For convenience, we shall classify the guides used in formulating the credit policies of central banks into earlier and later guides. The purpose of this classification is not to show that one guide was used at one time and that an entirely different one was used at a later time. The criteria which were employed in early banking history are in some degree followed today. The interpretations of them, however, have changed greatly since they were first enunciated. For example, the announced purpose of much of the regulation of money and credit in England in the nineteenth century was to stabilize business, and this guide still has its proponents.

Bankers and statesmen of that period hoped to achieve stability by placing rigid limitations on note issue and guaranteeing the redeemability of bank notes in gold. Today much less faith is placed in this method of achieving stability. In other words, the aims of central banking authorities may remain essentially unchanged over a long period of time, but continuous experimentation with the means of achieving these aims takes place.

Gold reserves as a guide. — The two earliest proposals for guiding the central banks were, first, the protection of the gold reserve of the country in order to guarantee the convertibility of the currency into gold, and second, the restriction of credit to the short-term needs of business. The obvious necessity for providing a more uniform medium of exchange than had previously existed caused the redeemability of currency to receive greater consideration in the early history of central banking than the restriction of central bank credit to the short-term needs of business.

The administration of the policy of guaranteeing the convertibility of currency into gold at the option of the holder of currency, called for the performance by the central bank of only this one main function, namely, the holding of ample gold reserves. To be sure, the performance of this function was related to the duty of stabilizing business. Holding ample gold reserves in the central bank was deemed to be the best method of stabilizing business because it would guarantee to the business community its ability to secure gold for sale abroad and would allow businessmen to quote prices in both the domestic and international markets in terms of gold. Furthermore, the gold reserves held by the central bank would serve as an upper limit to the amount of circulating currency which could be made available to the public, thereby minimizing the threat of inflation and rising prices. An additional gain from this ready redemption was the lessening of the desirability of hoarding. Not all hoarding arises from fear of devaluation, but that part which does originate from this fear would be minimized if the central bank possessed ample resources in gold.

A central bank which uses gold reserves as the sole criterion in the formulation of its credit policies must, when those reserves decline, differentiate between a decline in reserves which is temporary and one which is not likely to stop short of the depletion of those reserves. If, for example, the decline in reserves is due to a gold outflow that

is only temporary in character, the central bank might purchase securities and bills in the open market in order to allow the commercial banks to ignore the gold movements. The same policy must be followed in the case of a decline in central bank reserves due to a seasonal upturn in domestic business activity. If, however, the decline in the reserves of the central bank is deemed to be due to speculative excesses, or other cause, which are not likely to correct themselves before the reserves are seriously impaired, the central bank might take quite drastic action to tighten the market. An outflow of gold that is likely to be of long duration might also call for strong measures designed to raise the general level of money rates in an attempt to stop or reverse the adverse gold movements. This differentiation between situations that call for a policy to speed and improve the natural forces of the market and those that call for a policy which would offset prevailing tendencies, is often extremely difficult to make. It is most difficult in the early stages of a movement when central bank action is likely to be most effective. If the central bank authorities mistake a gold outflow which is the beginning of a long-term movement in that direction for a temporary one, they might take such action as will seriously damage the entire banking system and cripple their own ability to cope with a crisis, should a crisis occur.

The bank rate as an instrument of credit policy. — Although the next chapter is devoted to a discussion of the instruments of credit policy, it is necessary to point out here that the chief instrument used by central banks in the early period of the history of central banking was the bank rate. When the central bank wished to aid commercial banks in expanding credit, it would lower the bank rate and, perhaps, supplement that action with open-market purchases. When it wished to curb a tendency toward over-expansion of credit on the part of commercial banks, it would raise the bank rate and, at the same time, sell securities and bills in the open market. The Bank of England accumulated a vast amount of experience with the use of the bank rate in the first half of the nineteenth century when recurring periods of expansion and contraction forced it to modify by administrative action the effects of gold movements and other forces, such as inordinate speculation, on its reserve position. During the same period, and for some time thereafter in countries without a central bank, each commercial bank was forced

to watch its own reserve position and to act accordingly. Since there was no central bank that could act to modify the effects of gold movements, the commercial banks relied on the more or less automatic forces to correct maladjustments. In those countries where no central bank existed, periods of excessive speculation were generally allowed to continue until the lending power of most of the banks was exhausted. It is difficult to prove, however, that the use of the central bank rate in the countries where a central bank existed, produced much more stable business conditions than prevailed in other countries.

Despite the fact that the use of the bank rate in England in the first half of the nineteenth century was not wholly effective in producing the desired degree of stability, out of the experiences of this period certain valuable lessons in the art of central banking were learned. One of these lessons was that a timely application of the instruments of control is essential to their effective use. Another was that a central bank must be managed with a view of protecting the reserve position of the banking system rather than with a view of making profits. These and other lessons gained from the experiences of the Bank of England were inherited by the Federal Reserve System in the United States when it was established in 1913.

Limitations on note issues. — One of the means of expansion that greatly impressed many persons in England in the first half of the nineteenth century was a greater note issue. It was observed that excessive note issues raised prices, drove gold from the country and depreciated the foreign exchanges. From these results, many careful students at the time concluded that rigid restrictions on note issue was a most important method of achieving stability. Conant described the doctrine embodied in this conclusion as follows:

The period during the crisis of 1839 developed a peculiar doctrine of finance in England, which obtained a strong footing among public men with only a rudimentary knowledge of political economy and has spread to some extent on the Continent of Europe and in the United States. This doctrine embodies the idea that bank-notes are a form of currency entirely distinct from other commercial paper and forms of credit; that an expansion of bank-note issues, even when redeemable in coin on demand, is a potent cause of commercial crises; and that the way to prevent crises is to place fixed limits upon bank-note issues. Few advocates of this theory have undertaken to place definite limits upon the volume of bills of exchange or other forms of commercial paper issues by solvent borrowers, but they have maintained that bank-notes were money for all

practical purposes of daily use; that an undue expansion in the volume of money has stimulated speculation and expelled gold under the operation of Gresham's law; and that the curtailment of note-issues would maintain sobriety in the mercantile world and restore the equilibrium of the foreign exchanges.²

In the paragraph quoted from Conant, the doctrines of a group of public men known as the "Currency School" are described. This group was very influential in the debates leading up to the passage of the Bank Charter Act of 1844. The chief doctrines of this school of thought may be summarized as follows: (1) The only things that can be included under the definition of money are bank notes and coins. (2) It is variations in the aggregate amount of money that produce fluctuations in the level of commodity prices. (3) Any change in the aggregate amount of the gold reserves of the banking system should bring about an equal change in the aggregate amount of the note circulation. (4) Bank deposits are capital funds of banks and are not media of exchange. (5) The issue of notes should have no relationship to the deposits and loans of banks.

A rival school of thought known as the "Banking School" agreed with the Currency School on two points, namely, (1) that the automatic gold standard was the most desirable form of monetary organization and (2) that the aim of the banking system should be greater stability of the price level and less violent fluctuations in the business cycle. They disagreed sharply with the Currency School on other points. The arguments of the Banking School may be summarized as follows: (1) Checks and bills of exchange as well as bank notes are media of exchange. (2) The quantity of bank notes in circulation is a result of price changes and not a cause, because notes are drawn from banks when the customers of banks need more cash as the price level or the volume of business increases and return to banks as the need for them declines with falling prices and lower levels of business activity. (3) The expansion of loans raises prices and encourages speculation. (4) The credit practices of banks should receive first consideration in the determination of the policies of the central bank.

The Bank Charter Act of 1844, a victory for the Currency School, provided for the division of the Bank of England into two parts. The Issue Department was allowed to issue notes to the extent of

² Conant, C. A., *A History of Modern Banks of Issue*, pp. 119-120. New York: G. P. Putnam's Sons, 1927.

£1,400,000 against government securities as collateral. This portion of the note issue became known as the fiduciary issue. Note issues in excess of this figure were to be backed by a 100 per cent reserve in gold. Another provision, which in time gave the Bank of England a monopoly of note issue, stated that no new bank of issue should subsequently be created in England and that a bank which was not issuing notes in 1844 could not thereafter obtain the power to do so. The other department of the Bank of England, called the Banking Department, was authorized to compete in the money market by making loans and by pursuing other banking operations.

This controversy between the Currency School and the Banking School has present-day importance because the Federal Reserve System in the United States embodied the basic precepts of the Banking School and has created much dissatisfaction among those persons who today believe that the note issue function and the loan function of banks should be separated. A proposal, known as the 100 per cent reserve plan, would completely separate from banking the power to issue money. The proponents of this plan contend that the two are now disastrously interdependent; that banking should be wholly a business of lending and investing pre-existing money; that the 100 per cent reserve requirement which applied to note issues of the Bank of England under the Bank Charter Act of 1844 should be extended to check-book money, that is, the demand deposits of banks. This plan is discussed in some detail in Chapter XXXI.

Sound credit as a guide. — After the passage of the Bank Charter Act of 1844, bank note issue became relatively unimportant. Deposit banking spread from London, where it reached a high stage of development earlier than elsewhere, into the interior of the country. The rapid growth of joint-stock banks and their amalgamation into a few large organizations, each with hundreds of branches throughout Great Britain, brought deposit banking close to the people. A continuously larger percentage of all transactions was consummated by the use of checks and a proportionately smaller percentage by the use of bank notes.

The development of deposit banking gave monetary theory a new orientation. It shifted emphasis from the note issue to the credit policies of commercial banks and, consequently, gave the central

bank new responsibilities. In making this shift to conform to the new conditions, central bank authorities retained much of their previous allegiance to the automatic functioning of the gold standard and also carried that allegiance into the realm of deposit banking.

The establishment of the Federal Reserve System in 1913 was a tardy response to the growth of deposit banking in the United States. The framers of the Federal Reserve Act sought to provide an organization for carrying on the banking process with a minimum of regulation over the individual commercial bank and a maximum of reliance upon automatic forces. They made note issue a function of the commercial banking process and limited the release of central bank credit, either through issuing notes or granting deposit credit to member banks, to the rediscounting of short-term paper arising from productive transactions. By restricting Federal Reserve credit through setting up qualitative standards, it was hoped that the proper quantity of credit would always be available.

Henceforth in our discussion of guides to central bank policy, we shall be concerned with the Federal Reserve System because it best embodies sound credit as the criterion of control. Sound credit is here classified among the earlier guides to credit policy because its nature is essentially passive, that is, it does not require active quantitative controls. This guide would allow the quantity of credit, the price level, gold holdings, etc., to seek their natural levels. We shall classify as later guides to credit policy those that would have the central bank exercise active control over these factors.

Laughlin defends the earlier interpretation of the functions of the Federal Reserve System as follows:

The possibility of unsound credit is, however, never absent so long as the assets behind the loan are questionable. The limit to sound credit resides only in the limit to sound assets, that is, those which are salable when liquidation is necessary. In brief, the one central achievement of the Federal Reserve Act is to be found in the provisions for testing the soundness of member banks, not by the quantity of discountable assets held, which could at any time of need for reserves be presented to the Federal Reserve Bank of its district and converted into legal reserves. In this way, the System's soundness is shown to be dependent, not on the quantity of money carried in its reserves, but on the quality and character of its assets. This is the pivotal matter of the whole System.³

³ Laughlin, J. L., *The Federal Reserve Act*, pp. 241-242. New York: The Macmillan Company, 1933.

Laughlin's test of soundness begs the question somewhat in that the rediscountability of paper is made the test. A change in the standards of eligibility for such rediscount would automatically make lower grades available. However, there is a large body of informed opinion which would have Federal Reserve policy restricted to control of credit quality, determined by the type of transaction to be financed. Yet the lines which distinguish liquidity and shiftability are not drawn with sufficient clarity to afford a clear-cut distinction between the two.

During the first eight years of its existence, the Federal Reserve System was not faced with a problem of credit control because it first went through its formative years and was thereafter placed under the domination of the Treasury for war-financing purposes. As early as 1918, the *Federal Reserve Bulletin* contained the following statement: "With the return of peace, the close of the period of urgent Government financing through the sale of long or short-term obligations comes in sight and the resumption of their function as a regulator of credit becomes a duty for Federal Reserve Banks"⁴ In October of the following year, a year of great speculation in commodities and rise in commodity prices, the Board admitted that "the extent to which Federal Reserve Bank rates may normally be expected to be effective . . . still remains to be determined. . . ."

At any rate it seems fairly clear that little desirable restraining influence could have been exercised by Federal Reserve Bank rates in recent months. While repeated tendencies toward speculation of one kind or another have manifested themselves and, at times, given rise to an undesirable situation, there is no reason to believe that an advance of rates would have held these tendencies in check, at any rate no such advances as could have been undertaken without serious injury to legitimate business and desirable enterprise which were entitled to encouragement and support. There is no ready method in reserve banking by which the use of reserve facilities can be withheld from use in undesirable lines.

The problem of controlling the volume and uses of credit in a country with so much diversity of business interests and business temper as the United States is far from simple and far from certain of solution. Experience alone can determine whether and in what manner a technique of control through rates can be developed which will secure the desired results. The objects to be attained are, however, clear and vastly important. They are to regulate the volume and uses of credit so as to give to productive industry at all times the

⁴ *Federal Reserve Bulletin*, December 1918, p. 1164.

beneficial effects of credit stimulus and support without, however, opening the way to the costly evils of credit and price inflation.⁵

It is undoubtedly true that the Federal Reserve Board was prevented by the exigencies of war finance from formulating and applying a theory of credit control. At any rate, the first complete exposition of its credit policy was enunciated in the report of the Federal Reserve Board for 1923. The director of the Division of Analysis and Research of the Federal Reserve Board at that time, Walter W. Stewart, summarized the policy in the following words:

I would say that the responsibility that rests upon central banks abroad and the Federal Reserve System in this country is primarily one of maintenance of sound credit conditions. . . . What is meant by sound credit conditions depends on what one regards the sound functions of credit to be. The function of commercial uses of credit is simply to facilitate the production and the marketing of commodities with the maintenance of adequate stocks of commodities in order that the marketing may be orderly. . . .

To test whether or not the credit condition is sound, one has to begin by determining the volume of production, and whether or not that production is moving promptly through the channels of distribution and whether or not inventories are accumulating. I can see, as an example, a situation where prices may not be advancing, but, on the other hand, declining, yet inventories of commodities were accumulating, and where, if additional credit were granted, it would be used for the purpose of adding to the stock, and would mean simply encouraging the accumulation of additional stocks.⁶

Some of the more important elements in the statement of policy made in 1923 may be summarized as follows:

1. The volume of Federal Reserve bank credit cannot be deficient or excessive if it expands and contracts with the credit needs of industry and agriculture for productive purposes only. Productive purposes are defined as those which promote the production of goods and their flow from producer to consumer. The volume of production, in turn, cannot be excessive if it is in equilibrium with the volume of employment and consumption.
2. Federal Reserve bank credit should be excluded from investment and speculative channels.
3. The ratio of notes and deposits to gold is to be rejected as

⁵ *Federal Reserve Bulletin*, October 1919, p. 911.

⁶ Quoted in Hearings on H. R. 7895 before the Committee on Banking and Currency, 69 Cong. 1 sess., Part 2, p. 763.

a guide to Federal Reserve bank policy because of the absence of an effective international gold standard.

4. Any single, simple guide to Federal Reserve bank policy which may have been followed in the past is to be abandoned in favor of such guides as may be derived from a careful consideration of all economic data which throw light upon the soundness of the business situation.

This summary of the 1923 pronouncement, although incomplete, suggests that some degree of both qualitative and quantitative control over the money market was planned. It is not to be interpreted, however, as the abandonment of the philosophy of accommodation. What is meant is that the Federal Reserve Board set up somewhat more definite "rules of the game" which were to be observed in the application of essentially the same philosophy of action which it had previously professed to follow. The composite judgment of businessmen is still to determine the cyclical movements of business so long as the adjustment of production and consumption is retained. That is, business shall continue to determine expansion and contraction, but expansion must not take the form of the inordinate piling up of inventories, as was the case in 1919, nor must contraction take the form of a sharp credit deflation. Forms of speculation, other than commodity or inventory speculation, are likewise to be frowned on. In accordance with this policy, credit must be restricted and funds withdrawn from the market when it appears that a period of prosperity is likely to degenerate into a speculative boom. Funds must be pumped into the market as soon as a sharp downturn in production indicates the prospect of a credit deflation.

The 1923 policy of sound business conditions as the guide to Federal Reserve credit policy definitely rejects other possible guides, at least as primary considerations, including: (1) that of stabilizing commodity prices; (2) that of stabilizing security prices; and (3) that of stabilizing foreign exchange relations.

The years from 1923 to 1926 inclusive, furnish the best illustration of the application of sound business conditions as the guide to Federal Reserve policy. The upturn in business activity in 1923 encouraged a policy of moderate restraint, while the very considerable contraction of business activity in 1924 led the Federal Reserve Board to adopt strong measures designed to increase the

supply of loanable funds at lower rates. In 1925 commodity prices continued to fall as security prices moved to higher levels. The stabilization of commodity prices as a guide to credit control would have called for easy money, while the stabilization of security prices would have called for restraining measures. The fact that neither a policy of very easy money nor a policy of strong restraint was adopted in 1925 and 1926 seems to imply that the Board thought that business conditions were sound and that no forceful action in either direction needed to be taken.

An appraisal of sound business conditions as a guide to the credit policy of the Federal Reserve banks must contain some references to certain limitations or handicaps which such a policy places on those who would apply it to the money market. Among these are the following:

1. This guide to credit policy presumes that easy money will produce an immediate impulse on the part of the business world to take advantage of low rates of interest and equally prompt action in the direction of contraction when higher rates are in evidence. As a matter of fact, the larger supplies of funds made available to the money market by an easy money policy may simply add to the large supplies already in existence, while a policy of restraint may encourage prospective borrowers to rush into the market before rates go still higher. In other words, the assumption of complete effectiveness of the techniques of credit control and "rational" responses of the business world may not be valid.

2. Since there is ordinarily a lag between a change in credit conditions and the responses of the business world to such change, it becomes necessary that the authorities who manipulate the control techniques should exercise rare judgment and foresight.

3. It assumes that a study of domestic business conditions will reveal all the factors which are in need of control. Despite these criticisms of sound business conditions as the guide to credit policy, the critics may be hard pressed to suggest a better criterion.

LATER INTERPRETATIONS OF GUIDES TO CREDIT POLICY

The criteria which have been classified as the earlier criteria of credit policy were the bases of most central bank policies up to the beginning of the World War (1914-1918). After the war, numerous

attempts were made to revive prewar theories and policies. Great efforts were exerted to restore the gold standard to its previous position as the automatic regulator of gold movements and gold reserves. As we have said, the Federal Reserve authorities during the war looked forward impatiently to the postwar period when they might follow the maxims of the founders of the Federal Reserve System. It appeared for a time in the postwar period that prewar theories and policies would successfully be restored. This hope was short-lived, however, and a reliance on automatic mechanisms gave way to conscious controls. The breakdown of the international gold standard, whatever the explanation of the causes of this breakdown, was, perhaps, the final blow to *laissez-faire* doctrines concerning the processes of money and banking. We turn, therefore, to a consideration of the later criteria of central bank policy in which it is assumed that the price level, the quantity of money and credit, and gold movements must be subjected to more or less rigid controls. The first of these factors will command the greatest attention.

With the outbreak of hostilities in 1914, there was an immediate disturbance among the world's currencies. Withdrawals of funds from such centers as New York and London caused considerable strain on the banking community with the result that specie payments had to be restricted. Before the end of the war, all countries had been forced to abandon a strict adherence to the gold standard. In these circumstances in which central banks were no longer under immediate pressure to maintain proportionate reserves, they were able to pursue other more insistent aims. Chief among these was the problem of financing the sale of large quantities of government securities, which they accomplished with notable or small success, depending on the country.

Partly as a result of the financial excesses of the World War period, the price levels of the major countries fluctuated through a wide range in the years which followed. The discussion of the value of money has already shown the consequences of such changes. When wide variations of this type occur, there is usually a demand that something be done to stop it. The period after the war was no exception; as the decade progressed, there occurred in the United States more and more discussions concerning the desirability of requiring the Federal Reserve Board to devote itself to the task of stabilizing the price level. Later, as prosperity changed to

depression, the demand became one of restoring the level of prices to that which had prevailed during the 1920's. Nor is this demand exclusively true of recent history. Conant shows that

The bad harvests and commercial collapse led to several attacks upon the resumption act in Parliament in 1822 and 1823, but they were rejected by large majorities. It was pointed out in the course of the debate that the low price of wheat, which was a great cause of discontent among the agricultural class, could not well be due to the alleged contraction of the currency, for a greater decline had taken place in France, which had been steadily upon a metal basis, and a like decline in other Continental countries where depreciated paper was still the medium of circulation.⁷

Before examining the recent proposals for central bank policies, it is interesting to consider the reasons why so much of the demand for reform has been directed toward monetary and banking institutions. When a business depression occurs, one of the most persistent phenomena is the disappearance of money caused by the repayment of debts to banks, which debts were previously created to finance business during the period of prosperity. There usually follows a public demand that the government intervene in the banking system and force an end to the contraction. In other words, the public is inclined to accept as the sole cause an element which is only a part of a complex economic maladjustment. Frequently this demand for intervention has been answered by legislation requiring the central bank to liberalize rediscounts, the individual banks to follow a more lenient loan policy, and the government to remonetize silver and print irredeemable paper money.

Price levels as guides. — All recent criteria for the guidance of central bank policy can be divided into two sections, namely, the stabilization of prices and the stabilization of production. The latter objective may be regarded as the more fundamental, for if it were accomplished by banking policy, or otherwise, price stabilization would be somewhat less important. The influence of price changes would then be confined to the distribution of income. On the other hand, price stabilization does not necessarily involve business stabilization.

There are four different criteria of bank-credit policy which relate to some aspect of price levels: (1) A constant supply of money which, in an advancing economy, would lead to a declining price

⁷ *Op. cit.*, p. 114.

level; (2) the stable price level; (3) the gently rising price level; and (4) the inflexible price level. Each of these has its proponents among the students of money.

The declining price level. — The proponents of a constant money supply argue from several assumptions. They assume that the most successful type of economic organization is a capitalistic system based upon free private enterprise, in which the remuneration of the factors of production conforms to their relative productivity. This assumption leads to a profound skepticism concerning the effectiveness of discretionary control by the state or central bank, whatever the guide employed to time the expansion and contraction of credit. The best guide, from the point of view of these individuals, would therefore be one which would operate automatically. Furthermore, their argument conceives credit as one of the major disruptive forces in modern business cycles. The pulsations of the credit system through alternating periods of expansion and contraction are, according to this view, the chief cause of the cycle. Individuals favoring this guide argue that when a bank creates deposits by buying investments or making loans, it adds to the supply of claims to goods without creating the means for increasing the available quantity of goods. Therefore the new credits will be used to bid goods away from those currently holding them. Since bank credits are generally employed to increase the volume of goods available for capital purposes rather than for consumption purposes, expanding the money supply will give rise to a disproportionality in the production of capital goods as compared to consumers' goods, because resources are being bid away from the consumers' goods industries to be used to construct capital goods. When the expansion of credits is discontinued, an excess supply of productive factors will be located in the capital goods industries. Price relationships will have been distorted by these changes, since the bidding for resources is achieved with a larger volume of purchasing power than had previously been in existence.

The proponents of a constant quantity of money contrast these effects with the operation of a system where expansion of credit is impossible. Capital goods, under such circumstances, would have to be constructed by the use of funds derived from current savings, and savings represent the voluntary choices of individuals and firms to refrain from current consumption. Hence, the competition

for goods would be eliminated and prices would not be affected directly. If the new enterprises financed from savings prove successful, their output will reduce prices since no new money has been created. But such declines of prices are not considered to be disruptive, for they are caused by lower real costs of production.

Declining prices also have another desirable function, according to the proponents of constant money, for they permit an equitable distribution of the fruits of advancing production. Individuals with fixed money incomes are able to secure a proportionate share of the greater real income under this plan, which, they argue, is not true, either of stable price levels or of increasing price levels. Those who advocate the use of stable prices as guides to credit policy attempt to refute this argument by the assertion that fixed incomes could be adjusted periodically to allow the fixed income receiver to share in the rising productivity of the economy. The weakness of this assertion is that this policy of readjustment of contracts is available now under the system of highly unstable prices and yet inertia, ignorance and custom prevent its being used. The conclusion of the group which defends declining prices is that the best way in which the banking system can assist the natural economic forces is to remain neutral. This can be accomplished by the stabilization of the quantity of credit.

A central bank policy directed toward stabilization of the volume of credit could be implemented in one of two ways. First, if the commercial banks were expanding their loans at a rate which exceeded the savings of the community, the central bank would follow a restrictive program. If the volume of loans were below the real rate of savings, the policy would be reversed. Second, a group of students in the United States has suggested that the best way this policy could be put into effect would be by the requirement of 100 per cent reserves. If banks should be required to hold in reserve the same amount which they are obligated to pay to depositors, they would be unable to engage in the creation of bank credit. The private expansion of credit would thus be stopped and the money supply would be varied in accordance with the desires of the money authority. Those advocates of 100 per cent reserves who would not permit any variation whatsoever in the amount of money also defend the stabilization of the quantity of credit as described above.

If the 100 per cent reserve plan were followed, the monetary authority would have to recognize that the velocity of money may change to such a degree that the effective supply of money actually varies even though the total amount of deposits remains constant. During periods of bad business, the turnover of bank deposits is low and the use of money is inefficient. When profits are being made and sales are active, the average bank deposit can be used to support a much higher volume of business. During some of the recent discussions on bank legislation in the United States, these changes in velocity were recognized and a proposal was made that reserve requirements of member banks should be based partly upon the activity of deposits as well as upon their volume.

The stable price level. — The principal argument for a bank policy directed toward the creation of a stable price level is that variations in the value of money disturb the distribution of income. All other arguments are subsumed under this single contention. The specific advantages of a stable price level, as compared with a falling price level, cited by the proponents of this policy are: (1) A declining price level imposes heavy burdens upon debtors while a stable price level, by enabling them to share more than proportionately in the advancing productivity, provides a diminishing burden of debt; (2) a declining price level under conditions of imperfect or monopolistic competition, violently disturbs the distribution of income in favor of monopolists, a condition not encountered under stable prices; (3) a declining price level implies a constant money wage whereas a rising money wage would prove more stimulating psychologically to the worker; and (4) a declining price level growing out of advancing productivity would often encounter different rates of advance among countries, making international adjustment more difficult than when the stable price level is employed as a guide.

In evaluating this criterion, it should be recognized that a stable price level does not mean stability in the relationships between individual prices; these should be permitted to vary according to specific demand and cost conditions. It is only the average of prices which is to be the objective of the stabilization policy. If stable prices were employed to guide central bank policy, the first problem would be the choice of a price index. The general price level, wholesale commodity price level, consumer goods price level,

or wage level might be selected to determine the timing of the controls. There is no general agreement among advocates of this objective, but the index most frequently discussed is the wholesale price level.

A second consideration with respect to this guide is the question as to what constitutes stability. Would a variation of 10 per cent be satisfactory or should some narrower range be attempted? Suppose a price decline is in the making, how will banking authorities know the amount of the decline which may occur and how should they act to confine the probable decline to the stated objective?

A final problem is the condition induced when credit is being excessively expanded in such lines as real estate and security speculation. In other words, such a policy does not attempt to direct the flow of credit in any logical way, since it is confined to purely quantitative aspects of the money problem. It must, therefore, be admitted that an important degree of instability could still exist even if the average of prices remained stable.

The gently rising price level. — The argument that the central bank should so control credit as to induce a slowly rising price level stems from the fact that business cycles have been less severe during such periods. When the long-term trend of prices has been upward, depressions have been short and the periods of prosperity long. The difficulty of reasoning from this fact is that the cycles may have caused the price changes rather than the reverse. If price control were used in an effort to create favorable business conditions, we might find that the price trends were caused by the long periods of prosperity and that, in the effort to secure more advantageous conditions, we had forfeited what we had previously possessed.

The inflexible price level. — The study of prices and price data in recent years has led to the rediscovery that certain prices, particularly those of manufactured goods, are relatively inflexible during periods of price change, while others, notably raw materials, fluctuate violently. In view of this fact, it is suggested that the monetary authority direct its efforts toward achieving and maintaining a condition of approximate balance between these two groups of prices. Since no time limit is ever stated by the adherents to this view, we may assume that once such a condition has been secured, it should be maintained indefinitely.

The one great theoretical difficulty in this proposal is its assumption that some particular intercorrelation between groups of prices should prevail indefinitely. Let us suppose that with 1926 as a base year, 1936 showed the prices of manufactured goods to have fallen 15 per cent while the prices of raw materials had declined 30 per cent. Under the proposal being considered, we would be supposed to assume that this disparity is due to the greater flexibility of the prices of raw materials compared with the prices of manufactured goods. Other more or less probable reasons for this difference might be:

1. The control schemes for stabilizing raw material prices had broken down and caused price disorganization.

2. The decline in raw material prices might have arisen from an oversupply of raw material producers.

3. The greater decline in the prices of raw materials might have been caused by a greater rate of technological progress in raw material production.

4. Technological progress in the manufacturing industries might have taken the form of greater efficiency in the use of raw materials.

5. The manufacturing industries might have followed a wiser policy with respect to the accumulation of inventories.

Just how many of these conditions should be corrected by monetary policy, the proponents of this criterion do not state. To secure an equivalence of prices under certain of these situations would be far more harmful in the long run than the price differential established by price-level variations. For the attainment and maintenance of such conditions, the central bank would have to possess the power to move resources from points of comparative oversupply to points of comparative dearth.

The proposal that credit policy be directed toward establishing group relationships has one main advantage in that it concentrates attention on the structure of individual prices and does not deal in such vague generalities as "price level," a concept which obscures much of the detail so necessary to analytical insight into the causes of instability. Thus, in directing its attention to the relationships among individual prices, the monetary authority might develop experience that would lead to better knowledge of price relationships and the manner in which they may be influenced by central bank action.

Federal Reserve policy and price stabilization. — We have already called attention to the fact that stabilization of prices was rejected in favor of sound business conditions as the guide to Federal Reserve credit policy in 1925-1926. The advocates of price stabilization have been very active, however. Numerous proposals have been submitted to Congress which would require the Federal Reserve System to stabilize the price level. The proposal which received the greatest attention from Congress was the Strong bill, submitted in 1926, which provided that the Federal Reserve banks should

Establish from time to time, subject to review and determination of the Federal Reserve Board, a rate of discount to be charged by such banks for each class of paper, which shall be made with a view to accommodating commerce and promoting a stable price level for commodities in general. All of the powers of the Federal Reserve System shall be used for promoting stability in the price level.⁸

A second Strong bill was submitted to the next Congress which would have made "stabilization of prices and of business conditions the primary objective of Federal Reserve policy and would require the Federal Reserve Board to publish at least annually the decisions arrived at in carrying out this purpose, together with the reasons therefor. . . ."⁹

In 1932, the Goldsborough bill proposed that the Federal Reserve Board use its power to restore the 1926 level of prices and to maintain that level. This proposal was approved by the House of Representatives early in 1932, but was defeated in the Senate. In the hearings on the Goldsborough bill, its advocates proposed that the Reserve banks should engage in open-market purchases of securities until the price level reached that of 1926. The Federal Reserve authorities at the time replied that they were doing everything in their power to check the current decline in prices. They also objected to legislative determination of procedures beyond that of laying down general principles.

Among the most important objections to price stabilization as the guide to Federal Reserve credit policy, voiced in the various hearings on the price stabilization bills and elsewhere, are the following:

⁸ Sixty-ninth Congress, First session, H. R. 7895.

⁹ Seventieth Congress, First session, H. R. 11,806.

1. Price stabilization assumes that price changes always have vicious effects. If price changes are attributable to monetary causes which bring about rather severe currency inflation and deflation and consequent business disequilibrium, the case for price stabilization should be stronger than it is. Price changes, however, are attributable to other factors, which would seem to indicate that such changes are more likely to be desirable rather than wholly undesirable. Among the desirable price changes are those attributable to technological factors such as improvements in the techniques of production and business administration. To prevent a gradual decline in prices, to the extent that such decline in prices is the result of these technological factors, may cause instability in the business situation when it might not otherwise exist.

2. Price stabilization further assumes a degree of effectiveness of the techniques of credit control which does not exist. When, for example, central bank policy is directed toward easing money rates in the expectation that business activity may increase, the result hoped for may not occur. Business enterprises might choose to wait for an indefinite time for further declines in prices, and people might prefer to carry larger balances rather than to invest in securities or commodities. The history of Federal Reserve policy furnishes very little assurance that even strong action will promptly reverse a trend toward higher or lower prices. Strong measures were taken in 1931-1932 to reverse the trend of prices with little apparent effect.

Since most of the techniques of credit control relate to money rates, it should be observed that Federal Reserve policy may affect open-market money rates promptly in the desired direction, but that the rates which prevail in the customers' loan market are much less sensitive to such control. The rates which prevail in many parts of the market for customers' loans remain stationary over relatively long periods, while rates in the open market are fluctuating widely. The yields on common stocks are likewise insensitive to the forces to which open-market rates are responsive. All rates which are insensitive to the forces to which open-market rates are sensitive, must necessarily prove a limiting factor on the efficacy of the instruments of credit control.

Another observation leading to the same conclusion is that business firms may not feel the force of higher open-market rates,

because they have ample cash balances to finance current operations. They may also resort for their long-term capital to the securities market, which may not be sensitive to central-bank credit policy.

3. A third assumption is that all the elements in need of control can be controlled by stabilization of the price level. The degree of speculative activity in the security and real estate markets, the international situation, the state of employment, and the like, may be considered worthy of careful consideration in determining Federal Reserve policy. Stabilization of prices as the guide to credit policy either ignores these factors or assumes that they can be controlled indirectly. Of course, other methods of control might be attempted to supplement those which would stabilize the price level, but it is possible that these different controls would logically call for such action as would conflict with the chief motive.

In March 1939, the Board of Governors of the Federal Reserve System expressed its reaction to a bill introduced in Congress by Senator Thomas of Oklahoma which would give it power to act as a monetary authority in order to return prices to the 1926 level. This statement was given to the press and sent to congressional committees considering price-management bills. Without specifically mentioning the bill before Congress, the board said "that an order by Congress to the board or to any other agency of Congress to bring about and maintain a given average of prices would not assist but would hinder efforts to stabilize business conditions." Although declaring itself to be in complete sympathy with the desire to prevent booms and depressions, the board said: "Experience has shown that (1) prices cannot be controlled by changes in the cost of money; (2) the board's control of the amount of money is not complete and cannot be made complete; (3) a steady average of prices does not necessarily result in prosperity; and (4) a steady level of average prices is not nearly as important to the people as a fair relationship between the prices of the commodities which they produce and those which they must buy." Contending that "cash and prices do not move together," the board said that from 1926 to 1929 there had been no change in the amount of currency but there had been a drop of 5 per cent in prices. From 1929 through 1938, there was an increase of 60 per cent in currency and a decrease of 20 per cent in prices. "Whether prices and the volume of money

do or do not move together depends on many other conditions, such as weather and the size of harvests, inventions, foreign trade, government spending, taxes, wages, and the general attitude of business."

Activity in the consumer goods industries. — Durbin¹⁰ has suggested another kind of guide to credit policy which would involve a study of the uses of the credit extended by the credit system. As long as credit is supporting a high volume of production in the consumer goods industries, it is simply assisting the economic system to a higher volume of production. But when the credit created is going into the capital goods industries, then the authority should exercise control to stop the expansion. This view considers that capital goods should be formed from the savings of the community and that the diversion of credit into these lines causes over-expansion that would not otherwise occur. The reason for this view is that bank credit competes with savings and lowers the rate of interest by increasing the supply of funds. The lower rate of interest induces investment which would not otherwise be undertaken and eventually a condition of capital oversupply exists, which leads to depression.

The expansion of funds for the support of activity in the consumer goods industries creates purchasing power for the individual and makes possible a higher standard of living. However, unless a marked departure from present banking rules is permitted, there is no way by which the money might come into the hands of consumers who could use it to raise the level of production in the consumer lines. Business has been the only segment of society other than government which could tap any important amount of bank funds, and when business borrows it must be for profitable purposes. To be profitable, the funds must be invested, and investment would mean that the funds had been used initially for other purposes than the support of consumption.

Business stabilization. — Central banks have frequently attempted to direct their policy toward business stabilization. Such a plan is less definite than Durbin's proposal, since the latter permits timing of control on the basis of output from both consumers' and producers' goods industries. General business stabilization affords one such specific clue to the timing of credit policy.

¹⁰ Durbin, E. F. M., *The Problem of Credit Policy*, New York: John Wiley and Sons, 1935.

Let us suppose that the central banking authorities encountered the following situation: Over a period of three years the index of production has risen at a rate of 8 per cent per year, while formerly it advanced 5 per cent per year. Should a series of controls be introduced in order to bring production back to its former rate or should it be assumed that the new rate will continue to prevail in the future? During the postwar decade, the Federal Reserve authorities mistook such a situation for a change of trend and assumed that the new rate would be the one which would characterize future growth. This is not meant as a criticism of their lack of foresight, for the first World War had so completely disrupted all the trends which had marked prewar changes that it was impossible to evaluate the trends of the times.

GOVERNMENT FISCAL PROBLEMS AND MONETARY POLICY

There is no student of money who proposes that the fiscal problems of the government should be the main criterion by which the central bank should determine its policy in controlling the money market. If we are to be realistic, however, this possibility must be considered, for there are few central banks which have not been governed at some time by the financial exigencies of government finance. Furthermore, the governments of the world have become the largest customers of the banks and are today the chief source of the demand for funds.

The ordinary relationship of the central bank to the treasury lies in the assistance given in the sale of securities as well as in their purchase in the open market. The central bank also assists in the collection of taxes and grants short-term loans during periods of balanced budgets. Yet in providing some of these conditions it may not act in the way calculated to promote the best social interests of the nation.

A conflict of social and political interests may occur as follows: suppose the government wished to borrow \$5,000,000,000 by the sale of bonds. Let us further assume that the rate of interest prevailing at the time for this grade of securities is $4\frac{1}{2}$ per cent and rising. If the government floated the bonds without central bank assistance it would have to pay a higher rate, let us say 6 per cent. However, by central bank action, that is, by the maintenance of

easy money market conditions, the government is able to dispose of the bonds at a coupon rate of $4\frac{1}{2}$ per cent. By this action the government is enabled to save \$75,000,000 in interest each year during the life of the bonds.

The creation of easy money conditions will also stimulate business borrowing under the conditions assumed, with the possible result that inflation and speculation will be followed by economic collapse. Such a series of events developed in the United States after the first World War. For example, a part of the agricultural problem of the postwar decade was a consequence of the grain and land speculation from 1919 to 1920, which speculation was aided by easy money conditions. The easy money policy of 1919 enabled the government to borrow more cheaply than might otherwise have been possible. But the social cost of the concomitant credit inflation and its sequel of deflation were doubtless greater than the amount of interest saved by the government.

Summary. — Various guides to central bank policy have been reviewed in this chapter for the purpose of clarifying some of the material which is to follow. No one guide has been followed consistently by central bank authorities, because the rapid changes which have confronted them, particularly since 1914, have outmoded earlier criteria of credit policy and have necessitated a high degree of flexibility in the application of the instruments of control. Federal Reserve policy, for example, can best be characterized as being based upon a balance of considerations. At one time, one element was emphasized which, at another time, was given scant attention in the determination of policy.

This opportunistic view of Federal Reserve officials may have been prompted by a realization that the art of forecasting and the theory of the value of money are not in a state which justifies optimism concerning our ability to control the monetary system by monetary manipulation. Economic stability and instability may have been recognized as only partially problems of money; technological changes, the immobility of capital and labor, disturbances such as war and drought, the actions of the monetary authorities of foreign countries, all represent forces of a dynamic character which make difficult the application of precise formulae for arriving at the appropriate actions.

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CHAPTER XXVI

INSTRUMENTS OF CREDIT POLICY

Introduction. — Preceding chapters have pointed out the guides which central banks have employed in regulating the actions of commercial banks in expanding credit; they have also indicated the market structure through which this regulation has been effected. Whether strong or weak instruments of control are needed depends upon the aims which the central bank hopes to realize. Some of the proposals which have been suggested for future central bank policy require highly effective and very far-reaching instruments in the hands of the central banking authorities. Many persons question whether the granting of such powers would not create problems more difficult to solve than the ones with which we now struggle.

In order to appreciate the difficulties of control, it is necessary first to examine the instruments by which central banks have sought in the past to attain certain definite economic objectives. Some of these instruments have been used with varying success for a long time; others have only recently come into use as techniques of control. Most important of these instruments now in use are:

1. Changes in the discount rate.
2. Open-market operations.
3. Moral suasion.
4. Establishment of eligibility requirements.
5. Changes in reserve requirements.
6. Bank examination and supervision.

A complete survey of all the monetary powers would include those exercised by the Treasury, which in recent years has taken a more conspicuous place than formerly in the control of the money markets of this country and of Europe. The powers of the Treasury will be discussed in a later chapter.

CHANGES IN THE REDISCOUNT RATE

The oldest of all the instruments of control available to central banking authorities is the rate charged on paper rediscounted or on

direct advances. Its earliest use, as might be expected, was in defense of the oldest of the safeguards to credit, namely, the protection of the gold reserves of the country. With respect to its use in England, Conant says:

A much more important and scientific step than cast-iron rules of circulation was adopted by the Bank of England for the protection of its gold reserve after the crisis of 1857. This step consisted in raising the rate of interest rapidly by degrees of one per cent at a time, instead of fractions of one per cent, in order to arrest the export of gold. The increasing ease and cheapness of communication had destroyed the value of differences of a fraction of one per cent, when this fraction was divided into fractions of a year, in attracting gold from foreign countries or arresting its departure. The theory of statesmen and students of political economy had generally recognized up to this time only two causes of the export of gold—payments for merchandise and the pressure of a depreciated currency. The bullion brokers, without spending time over theories, had long since learned by observation that it became profitable to export gold when interest rates abroad were higher than at home. They fabricated bills of exchange, had them discounted by bankers, took the proceeds in gold and shipped the gold to the point where it would earn the highest interest.¹

The comment of Walter Bagehot on the success of this policy is also quoted by Conant as follows:

The beneficial result of the improved policy of the bank was palpable and speedy: we were enabled by it to sustain the great drain of silver from Europe to India to pay for Indian cotton in the years between 1862 and 1865. In the summer of 1864 there was special danger; but by rapid and able use of this policy, the Bank of England maintained an adequate reserve, and preserved the country from calamities which, if we had only looked to precedent, would have seemed inevitable. All the causes which produced the panic of 1857 were in action in 1864; the drain of silver in 1864 and the preceding year was beyond comparison greater than in 1857 and the years before it; and yet in 1864 there was no panic. The Bank of England was almost immediately rewarded for its adoption of right principles by finding that those principles, at a severe crisis, preserved public credit.²

It should be recognized that the type of drain which the Bank of England affected by this policy was a short-term movement, created in part by differences in the short-term rates of interest in the centers involved. It is questionable whether control by means of changes in money rates could have changed a flow which originated in an unfavorable merchandise balance or in long-term forces, such as a capital movement for long-term purposes. Clearly such objec-

¹ Conant, C. A., *op. cit.*, p. 129.

² *Ibid.*, p. 130.

tions are based on relative considerations, for if the merchandise balance should arise from slight differences in comparative costs, these costs themselves would be affected by the level of interest rates. Similarly, if the movement of long-term capital is developing from small differences in yields, a rise in the local rate might induce home investment. However, in the latter case, there would have to be some prospect that the capital would continue for a time to earn the higher return in domestic investment.

As long as the rate of discount is altered to produce changes in the flow of gold, the central bank has a long precedence for its action; it is on less certain ground when the rate changes are calculated to increase or decrease domestic borrowing. It will be remembered that the central bank frequently acts to control the volume of credit in use by the economic system, believing that by such control it may be able to influence the level of prices and business activity. In this connection, it is believed that when conditions seem to warrant more stringent regulation, the central bank raises the rate of discount, thereby increasing the cost of money to the commercial banks, which, in turn, pass on these increases to their customers. The business borrower who has been expanding his business on borrowed money finds costs have increased to the point where expansion is no longer profitable; he therefore restricts his activity and repays the loans outstanding, and the volume of credit is thus decreased. Since the volume of credit is presumed to have an intimate connection with the level of prices and business activity, the boom is brought to a close.

The same general reasoning prevails with respect to the period of decline in business activity. If all firms were arranged in the order of their costs of production, some firms that had had no profit would make a profit at a lower interest cost. This situation would be especially true with regard to those industries, such as construction and merchandising, in which interest cost is a major factor. If the level of interest rates were lowered, then the higher level of activity in these lines would increase the money flow throughout the system and bring about a general improvement in business conditions.

Despite this theoretical demonstration, it is necessary to ask why changes in the rate of interest have often had so little effect upon the volume of credit used by the business world. First, changes in

the interest rate at the central bank are not immediately or proportionately reflected in changes in the rates charged customers by the commercial banks or in investment markets. Consequently, in so far as the public is concerned, the rise in the rate of rediscount is a form of moral suasion in which the attitude of the central banking authority is demonstrated, but by which the cost of credit is little affected, since moral suasion simply amounts to a kind of official forecast of the state of business.

Second, the rate of rediscount has had less effect than is generally credited to it, owing to the timing of the use of the instrument. There are two important reasons for ineffective timing in the past: (1) the central bank has, at times, been preoccupied with problems of government finance and therefore has created conditions in the money market favorable to the development of a boom; (2) at other times, the criteria upon which such a policy would have been based have been confusing by not affording any clear-cut basis for action. For example, in 1927 the Federal Reserve Board could have used wholesale prices and foreign conditions as sufficient justifications for an easy money policy; but conditions in the stock market dictated a contrary action. Where such a conflict of criteria exists, it is difficult for a money authority to know which course to take.

Third, and probably most important, is the high proportion of business costs which are represented by items other than interest payments. Suppose a business in which 96 per cent of the costs are not related to interest rates, and of the remainder one-half is interest and the rest is profit. It is possible that a doubling of the rate will eliminate the margin of profit; yet such changes in interest rates usually occur at a time when business volumes are advancing, with important results on the level of costs because of changes in the rate of turnover. Rising prices also afford profits which would otherwise have been eliminated, if other things had remained the same when the rate of interest was changed. When the volume of business is declining, a fall in interest costs is likely to be less influential than the threat of further declines of prices and volumes. If the price level is falling at a rate of 10 per cent a year, the greater advantages of waiting until the completion of the decline are apparent, even though it is known that current rates of interest are more favorable than future rates.

Penalty rates. — Monetary and banking authorities do not agree as to what rate is a penalty rate at any one time or in any one period. Despite such disagreement, a penalty rate may be defined for present purposes as the rate charged by a central bank which is in excess of the yield on the instruments offered to it for the purpose of receiving accommodation. Several considerations have forced the Federal Reserve authorities to abandon penalty rates as an instrument of credit control. Among these considerations are: first, customers' rates vary greatly in different parts of the United States and strong political pressure has been brought against wide variance among Federal Reserve bank rates in the different districts, and second, the results desired by the imposition of penalty rates are difficult to achieve. The latter point is most apparent when it is considered that the Federal Reserve banks do not have complete assurance of the uses of reserve bank credit by the member banks, that is, a bank may rediscount paper, the original purpose of which was to finance commercial, productive processes, but may use the proceeds of the rediscount transaction for another purpose. Upon what, then, should the penalty rate be assessed? In addition to these considerations there exists some doubt concerning the efficacy of the rediscount rate as an instrument of control, whether it is a penalty rate or not.

The Federal Reserve Board, in its earlier years, frequently discussed the penalty rate. The domination of the Board by the Treasury for purposes of financing the World War put an end to this discussion. After the war period, the deflation which set in brought pressure for lower rates. Later the Federal Reserve Board adopted policies, such as that designed to achieve a greater measure of uniformity of rates in different sections of the country, which meant a virtual abandonment of penalty rates. The result has been that in recent years very little attention has been given this instrument of control. Future developments may, of course, revive interest in this subject.

OPEN-MARKET OPERATIONS

The second of the traditional instruments employed by central banks in the control of credit conditions is the purchase and sale of securities in the open market. In the history of Federal Reserve

bank policy, a recognition of the inefficacy of the rediscount rate as an instrument of credit control has shifted the emphasis to open-market policy. Unless the use of the rediscount rate is supplemented by open-market operations, member banks may find it unnecessary to rediscount paper with the central bank at a higher rate with the result that the higher rate is ineffective. The idea behind open-market operations is to make the higher rate effective by withdrawing funds from the market through open-market selling carried on simultaneously with, or prior to, raising the rediscount rate and, conversely, by open-market purchasing at the same time or prior to a decrease in the rediscount rate.

For example, when securities are sold in the open market by the Federal Reserve banks, the buyers may be the member banks themselves, other financial institutions, or individual purchasers. In any event, the securities are paid for by checks drawn on deposit credits with the commercial banks or on the Reserve banks when member banks are purchasers. These checks, when received by the central bank, are used to reduce the account of the member bank against which they are drawn. Since reserves of the member banks consist of deposits with the central bank, the member bank will find that it must either call its loans, reduce the scale of its lending, or replenish the reserve account by borrowing from the central bank. This latter course of action may be accomplished either by discounting its own note, which is supported with the proper collateral, or by rediscounting the eligible notes of its customers. Where rediscounting is necessary, the higher rates will be passed on to the borrowing customers, first, because money so acquired will be more expensive, and second, because a lower scale of lending brought about by the restricted reserve position will make possible a higher level of interest rates.

The reverse of this action takes place when the purpose is to stimulate the volume of lending. During 1932, the Federal Reserve banks acquired a total of \$600,000,000 worth of government bonds while creating a condition of ease in the money market.

The open-market policy, which at times supplanted and at other times supplemented control through the rediscount rates, was based upon the following reasoning. The purchase or sale of securities by the Federal Reserve banks determines in part the volume of member-bank indebtedness. The volume of member-bank indebt-

edness at the Federal Reserve banks, in turn, determines open-market money rates. This latter conclusion, it was contended, derives from the fact that banks are disposed to withhold new commitments when their indebtedness to the Federal Reserve banks is high, and to lend and invest freely when their indebtedness is low.

Riefler developed this explanation of the effect of open-market policy, in part, as follows:

... that under present conditions the volume of member bank indebtedness at the reserve banks at any given time is one of the most important single monetary factors in the level of money rates, and that the prospect of increase or decrease in that indebtedness is one of the most important single factors in the rate outlook. Various monetary factors — such as gold movements, changes in currency demand, and open-market operations by the reserve banks — which determine the volume of this indebtedness will be analyzed later in this inquiry. The net effect of all of these varying demands which are present in the money market, however, is registered in the current indebtedness of member banks at the reserve banks and changes in this indebtedness appear to be the initiating force in corresponding changes in money rates. It is this relationship apparently which has given to reserve bank operations in the open markets that peculiar efficacy for control over the money markets, which has to be written more fully than it has been written into reserve banking theory.³

Whatever the merits and demerits of this contention as applied to the period 1922–1927, it is now quite clear that it did not provide a workable basis for coping with the inordinate speculation in securities in 1928–1929 or with the deflation of 1929–1933. According to Harris:

No theory of control has received so much support both in official and unofficial circles; and the exaggerated faith in this weapon accounted in no small part for the failure of reserve policy in 1927–32. In truth, open-market operations have proved to be a weapon of second rate effectiveness; and the high hopes held out for them are to be explained by a failure to understand their significance and functioning.⁴

Thus, open-market operations, as well as the rediscount rate, proved to be a disappointment — so much so that the Federal Reserve Board turned to moral suasion in 1928 and 1929, and the

³ Riefler, W. W., *Money Rates and Money Markets in the United States*, pp. 27–28. New York: Harper & Brothers, 1930.

⁴ Harris, S. E., *Twenty Years of Federal Reserve Policy*, Vol. I, p. 11. Cambridge: Harvard University Press, 1933. Reprinted by permission of the President and Fellows of Harvard College.

Board under the Roosevelt Administration practically abandoned this instrument after it failed to promote recovery in 1931-1932. In this latter period, as we shall see later in this chapter, hundreds of millions of dollars' worth of securities were purchased by the Reserve banks with little effect upon the attitude of the business world toward making new commitments. Owing in part to the failure of open-market policy, the Treasury in 1933 virtually assumed the task of controlling the money market. Of course, no one can say what the developments would have been in the absence of open-market operations or with a different policy in effect.

The chief weaknesses of open-market operations as an instrument of control, as revealed by the history of Federal Reserve policy, may be summarized as follows:

1. Open-market operations give little or no assurance that business attitudes will change in accordance with them; that is, business activity in many fields may continue to expand or to contract in the face of open-market selling or open-market buying on the part of the Federal Reserve banks.

2. Gold movements, the volume of money in circulation, etc., may offset wholly or in large part the effect of open-market operations.

3. The support which the Federal Reserve banks give to the market for bankers' acceptances may be inconsistent with the more general open-market policy at a given time. For example, purchases of acceptances by the Federal Reserve banks in 1928 and 1929 may have been excessive in view of the general policy of contraction in the volume of Federal Reserve bank credit outstanding. It may be contended, however, that their purchases of acceptances financed productive, commercial transactions and did not encourage, directly at least, the speculative activity at the time.

MORAL SUASION

The instrument of credit control which has been designated moral suasion consists of warnings to the member banks against the excessive use of Federal Reserve credit facilities. Generally this method is adopted only when the credit situation has become serious or undoubtedly overextended and consists of a general pressure on the member banks to reduce the volume of their loans. Loans on securities for speculative purposes are a case in point. The pressure

may take the form of warnings against overextension, statements concerning the limitation of Federal Reserve funds, the barring of certain loans from rediscount privileges, and the outright refusal to lend funds to those banks which have failed to cooperate in the policy of restriction.

On occasion, moral suasion has been used to stimulate expansion rather than to halt it. During the World War, banks were urged to accommodate the more essential industries and to reduce the volume of credit granted for less essential purposes. More recently, a policy analogous to moral suasion was used by the government, when banks were investigated for their failure to grant loans during the years of the depression. The implication of this investigation was that the banks were engaging in a kind of capitalistic sabotage and that the unsatisfied demands for loans were for good purposes. The investigators were unable to determine that this had occurred; however, the investigation may have had its effects in stimulating the banks to be more liberal in granting loans.

Moral suasion as an instrument for restricting the flow of funds into speculative channels was used by the Federal Reserve Board in the early months of 1929. It appears that there was a tacit agreement among the members of the Board that something should be done to restrict speculation. The board of directors of the Federal Reserve Bank of New York favored an increase in the rediscount rate, but the Federal Reserve Board denied it permission to make such an increase. In the spring of 1929, the Federal Reserve Board vetoed the petitions of the Federal Reserve banks of New York, Chicago, and Boston to raise their rediscount rate to 6 per cent. In place of this traditional policy, the Federal Reserve Board in February announced that it would thereafter refuse the rediscount privilege to those member banks which maintained an unreasonable volume of loans for speculative purposes. The Board explained its views as follows:

The Federal Reserve Act does not, in the opinion of the Federal Reserve Board, contemplate the use of resources of the Federal Reserve Banks for the creation or extension of speculative credit. A member bank is not within its reasonable claims for rediscount facilities at its Federal Reserve Bank when it borrows either for the purpose of making speculative loans or for the purpose of maintaining speculative loans.

The Board has no disposition to assume authority to interfere with the loan practices of member banks so long as they do not involve the Federal Reserve Banks. It has, however, a grave responsibility whenever there is evidence that member banks are maintaining speculative security loans with the aid of Federal Reserve credit. When such is the case the Federal Reserve Bank becomes either a contributing or a sustaining factor in the current volume of speculative security credit. This is not in harmony with the intent of the Federal Reserve Act, nor is it conducive to the wholesome operation of the banking and credit system of the country.⁵

In the spring of 1929, the Federal Reserve Board seemed to place greater faith in moral suasion than in increases in the rediscount rate as a means of restricting speculative excesses. The majority of the Board felt that an advance in the rediscount rate to, say, 6 per cent would hamper business activity and perhaps bring a crisis. The Federal Advisory Council, for a time, agreed with this view,⁶ but officials of the Federal Reserve Bank of New York called vigorously for an increase in its rediscount rate.⁷ The Board believed that by moral suasion it could keep member-bank funds out of the stock market and at the same time make funds available for commercial, productive purposes at reasonable rates.

About June 1 (the exact date is unknown), the policy of direct pressure or moral suasion was abandoned, and finally, on August 8, the Board approved an increase in the rediscount rate of the Federal Reserve Bank of New York to 6 per cent. This action may have been taken with a view to encouraging the member banks to prepare themselves for a possible crisis. This interpretation receives support from the fact that the buying rate on acceptances was lowered and the Federal Reserve banks bought acceptances in large volume in August, September, and October. Earlier in the year the Federal Reserve banks had withdrawn their support from the acceptance market. In January, they held \$438,000,000 worth of acceptances; in July, \$72,000,000 worth; and, in October, \$337,000,000 worth. The increase in acceptances held by the Reserve banks from July to October and a modest increase in monetary gold stock, were factors of increase in funds available to the money market, which offset the effects of the increase in the

⁵ *Federal Reserve Bulletin*, 1929, Vol. 15, p. 94.

⁶ *Annual Report of the Federal Reserve Board*, 1929, p. 218.

⁷ See Hardy, C. O., *Credit Policies of the Federal Reserve System*, Ch. VII. Washington, D. C.: The Brookings Institution, 1932.

rediscount rates. Another factor of increase in Federal Reserve credit outstanding was the gain in the security holdings of the Reserve banks.

Instead of being reflected in an increase in member-bank reserve balances, these factors were accompanied by (1) an increase in bills discounted with the Reserve banks and (2) an increase in loans to customers on securities. Loans to brokers for the account of others also increased. A continuation of credit expansion (especially in speculative channels), rather than a contraction, took place.

Despite the failure of moral suasion to achieve contraction of member-bank credit and its failure to stop the speculative excesses of the time, it must be admitted that the Federal Reserve banks kept themselves in a position to alleviate the situation if a crash should occur. The member banks were given the opportunity to improve their reserve position if they desired to do so. When the crash did come in October, which event cannot be said to have occurred because of any restrictive policy of the Federal Reserve Board, the Reserve banks were able to extend credit at lower rates and to increase immediately their holdings of securities.

ESTABLISHMENT OF ELIGIBILITY REQUIREMENTS

The establishment of eligibility requirements has been used for many years as an instrument for controlling the volume and quality of bank credit in the economic system. Its use by a central bank requires the formulation of standards concerning the credit instruments rediscounted by the central bank. In order for the individual bank to be able to secure funds from the central bank, its loan portfolio must contain paper which meets the standards thus established. There are two specific directions in which such regulation may operate, namely, the paper may be limited as to the types of transactions which are financed or it may be limited in terms of the time to maturity. The regulations under the Federal Reserve Act and its amendments have employed both of these limitations. The first was contained in the provision making eligible only the paper arising from the financing of commercial, productive transactions. The second stated that the rediscounting privilege should be extended only to paper having ninety days or less to run in the case of com-

mercial and manufacturing paper and nine months or less in the case of agricultural paper.

Since the establishment of the Federal Reserve System, the chief problem concerning eligibility requirements has been to use them in such manner as to reduce the amount of funds available for speculative purposes. An appraisal of this effort must be developed in terms of the ability of any banking authority to direct the flow of credit by such an instrument. Essentially, the use of this instrument seeks to control the flow of funds by regulating the point at which funds enter the economic system. There are three objections to the use of this method. First, it should be remembered that the velocity of money is one of the components of the effective supply of money. Records of the velocity of deposits in New York during the stock-market boom indicate that substantial increases in the supply of funds grew out of these changes in velocity. The same situation may characterize the flow of funds in real estate or commodity speculation when the rate of advance in prices is sharp enough to offer quick profits.

The second objection relates to the use of the money once it has left the hands of the original borrower. Suppose an individual secures a loan of \$50,000 for purposes which would be regarded as legitimate by the Federal Reserve banks. A number of secondary transactions will develop when the money is invested, that is, those who receive the money from the borrower are not amenable to the control of the central bank and can, therefore, employ the funds in any way they desire. To be sure, the original use of the funds may be deemed to be more important than the secondary uses, and there exists the possibility that the funds may, in every case, be used for legitimate purposes. It is not meant to suggest that in all cases something controverting central bank policy must occur, but rather that, given an incentive to do so, the funds may be diverted to speculation.

The third point at which eligibility rules may be rendered ineffective can be illustrated by the case of a business which is so situated as to be eligible for Federal Reserve accommodation through the member bank. Suppose the business to be adequately supplied with liquid funds which are used for speculative purposes and that the cash deficiency is relieved by borrowing. The presentation of the note arising from this transaction for rediscount would

provide the Federal Reserve bank with no information that would validate a denial of the credit. The funds are being used for legitimate purposes but the occasion for the loan is the desire to speculate. It should be admitted, however, that the number of cases of this type is probably not large.

In appraisal of eligibility requirements, Harris says:

In 1914 eligibility laws were considered of fundamental importance; today they are negligible. Access to a central bank ought not to be determined by technical rules of eligibility, especially by rules that are based on a banking theory that can no longer be accepted. The tendency has been to liberalize rulings from the very beginning: reserve banks have not been able to control the supplies of reserve credit to any important degree by depending on eligibility regulations.⁸

Hardy concurs in this opinion in the following words:

This doctrine is plausible, but it rests upon two assumptions of fact, of which one was probably never justified and the other has now broken down. The first assumption is that fixed capital loans cannot be liquidated in time of need; the second is that the bulk of working capital loans are truly self-liquidating. . . . Commercial loans also are liquid, if at all, only from the standpoint of the individual bank, not from that of the system. This fact is generally overlooked by the opponents of security financing on the part of the banks. From the standpoint of the individual bank, over-the-counter loans, which make up the bulk of commercial paper, are much harder to liquidate than are open-market investments. In a very large proportion of cases they cannot be called when due, even though the borrowers are perfectly sound. The borrowers are the banks' principal customers, and to a large extent are the source, directly or indirectly, of its deposits.⁹

CHANGES IN RESERVE REQUIREMENTS

Under the Banking Act of 1935, the Board of Governors of the Federal Reserve System has been given power to alter the reserve requirements of the member banks by as much as 100 per cent of the original requirements. This means that, while the reserves required may not be lowered, they may be raised from the previous level of 13, 10, and 7 per cent on demand deposits, and 3 per cent on time deposits, to 26, 20, and 14 per cent on demand and 6 per cent on time deposits. Since the passage of the recent act, the Board has faced two distinct situations. The first occurred during

⁸ *Op. cit.*, Vol. II, pp. 467-468. Reprinted by permission of the President and Fellows of Harvard College.

⁹ *Op. cit.*, pp. 330 and 332.

the period of prosperity in 1937 when it raised the requirements, in a series of steps, to the full limit allowed by the law. The second development occurred in 1938 when the decline of business was the occasion for a reduction in the level of reserve requirements. In 1936, effective on August 15, the reserve requirements for all member banks were increased 50 per cent. The Board called attention to the existence of excess reserves of \$3,000,000,000 and to the likelihood of a further increase in that figure, and explained its action in its 1936 Record of Policy Actions as follows:

The portion of existing excess reserves, which will be absorbed by the Board's action, if permitted to become the basis of a tenfold or even larger expansion of bank credit, would create an injurious credit expansion. It is for this reason that the Board decided to lock up this part of the present volume of member bank reserves as a measure of prevention on the one hand and of further encouragement to sound business recovery and confidence in the long-term investment market on the other hand.

The present is an opportune time for the adoption of such a measure. While there is now no excessive credit expansion, since the excess reserves have not been utilized, later action when some member banks may have expanded their loans and investments and utilized their excess reserves might involve the risk of bringing about a severe liquidation and of starting a deflationary cycle. It is far better to sterilize a part of these superfluous reserves while they are still unused than to permit a credit structure to be erected upon them and then to withdraw the foundation of the structure.¹⁰

At a meeting of the Board of Governors on January 6, 1937, further increases in reserve requirements were decided upon to take effect on March 1 and May 1 of that year. This action exhausted the Board's power under the law to raise reserve requirements to not more than twice the amount prescribed for member banks in section 19 of the Federal Reserve Act. A further reason for this action is contained in the explanatory statement of the annual report for 1937:

The Board also considered whether in case it was decided to eliminate a part of the excess reserves, it would be best, in the then existing circumstances, to accomplish this by reducing the System's open-market portfolio or by a further increase of reserve requirements. It was decided that action on reserve requirements should come first because it should be taken while reserves were ample and well distributed. As was said by the Board in July 1936, "it is far better to sterilize a part of these superfluous reserves while they are still unused than to

¹⁰ *Annual Report of the Board of Governors of the Federal Reserve System, 1936*, p. 217.

permit a credit structure to be erected upon them and then to withdraw the foundation of the structure."

An increase in reserve requirements would not diminish the large volume of deposits of bank customers seeking investment which were ample to assure the continuance of favorable money rates for capital purposes. At the same time, with excess reserves reduced to a manageable figure, the Reserve System would be in a position to take prompt action to bring about current adjustments of the reserve position of member banks to credit needs by employing the more flexible instrument of open-market operations to ease or tighten conditions in the money market.¹¹

As a consequence of this action, some interior banks were forced to withdraw a part of their balances with correspondent banks in the large financial centers. These banks, in turn, sold government securities, which sales account in part for the increase in the yield on long-term government bonds from $2\frac{1}{4}$ per cent in February to $2\frac{3}{4}$ per cent in April. To meet this situation, the Federal Open Market Committee engaged in a series of open-market operations. Between March 10 and March 31, it increased the System's holdings of Treasury bonds by \$104,000,000 and decreased its holdings of Treasury notes and bills by the same amount. Between April 4 and April 28, \$96,000,000 worth of Treasury bonds were bought, and the decline in their price was halted.

On April 15, 1938, the Board of Governors voted to reduce the reserve requirements of member banks by approximately $12\frac{1}{2}$ per cent. As a result of this action, each member bank was required to maintain on deposit with the Federal Reserve bank of its district reserve balances equal to 12 per cent of its net demand deposits if the bank was classified as a country bank, $17\frac{1}{2}$ per cent of its net demand deposits if the bank was located in a reserve city, and $22\frac{3}{4}$ per cent of its net demand deposits if the bank was located in a central reserve city, plus 5 per cent of the time deposits for all member banks.

The reasons for this action were presented as follows:

It was estimated that as a result of this reduction in reserve requirements excess reserves of member banks would increase by about \$750,000,000. This action had been agreed upon by the members of the Board as a part of the program announced by the President of the United States on April 14, 1938, for the encouragement of business recovery. Although there had been excess reserves in amounts considered ample to meet all probable needs of agriculture,

¹¹ *Annual Report of the Board of Governors of the Federal Reserve System*, 1937, p. 5.

commerce, and business, the volume of business activity had declined with such rapidity as to produce injurious deflationary effects upon commodity prices, the capital market, and industry generally. In these circumstances and in view of the other steps proposed to be taken in the Government's program for encouraging business recovery, the Board decided that a reduction in reserve requirements of member banks might be helpful, as a part of a concerted effort by the Government to carry out the purposes of this program, by assuring the continued availability of ample funds for meeting business requirements and thereby preventing injurious credit contraction.¹²

Weaknesses of control through reserve requirements. — Changes in reserve requirements as an instrument of credit control are similar to open-market operations in that their effect is positive and is applied directly to the reserves. The theory underlying this form of regulation is that an increase in reserve requirements will reduce the amount of the excess reserves of the member banks, so that other instruments of credit control will be more effective. If most member banks possess huge excess reserves, they are not as sensitive to changes in the rediscount rate and to open-market operations as they may be when excess reserves are low or non-existent.

In pointing out this possible effect of increasing reserve requirements, it should be apparent that excess reserves are not held in equal amounts by all the banks in the system. Recent experience with this instrument has shown that some banks were forced to dispose of investments in order to meet higher reserve requirements, even though they were forewarned of the action. Such sales of investments are not necessarily made at the best time, either from the standpoint of the price received or from the standpoint of their effect on the bond market. In 1937, the bond market did actually weaken during the period in which these sales were occurring, but that the sales were the sole cause of the weakness would be difficult to establish.

A further aspect of the action of this instrument is that during the period in which it was applied, the large eastern banks were receiving funds through the importation of gold which kept them amply supplied with funds with which to meet the changed conditions. This source of renewed supply was not directly available to the

¹² *Annual Report of the Board of Governors of the Federal Reserve System*, 1938, pp. 73-74.

interior banks. In the future, during a period in which gold is being exported, the opposite effect may be expected.

Finally, it is possible for the managers of the banks' investment and loan portfolios to operate so as to be able to meet the maximum requirements under the law. If most banks are prepared to meet the highest possible reserve requirements, the effect of an increase within the present permissible limits will have been lost. For example, an increase from $17\frac{1}{2}$ per cent to 20 per cent in the reserve requirements against the demand deposits of reserve city member banks will have little restrictive effects if those banks are ready to meet the higher requirement.

BANK EXAMINATIONS AND SUPERVISION

The Federal Reserve Act provides that the member banks are to be subject to regular examinations for the purpose of ascertaining the lines of credit extended by them. This provision has been subject to different interpretations, with the result that some Federal Reserve banks have made more searching inquiries into the assets, management, and policies than have others. Another source of confusion has been the overlapping authority of the different regulatory agencies. The Comptroller of the Currency, the state bank supervisory authorities, and the Federal Reserve banks all make bank examinations. In recent years the Federal Deposit Insurance Corporation has also been given supervisory powers and the Reconstruction Finance Corporation examines the banks from which it purchases preferred stock or capital debentures.

Throughout the years of confusion on this matter, the Federal Reserve Board issued pronouncements in which it indicated that the procedure of bank examinations might be a weapon of credit control. Examples of such statements are the following: "... through examinations or otherwise, a reserve bank can do much by other means than the changes in discount rates to establish an effective supervision and control of the credit released by it to its member banks."¹³ "... not only the legal eligibility and soundness from the credit point of view of the paper presented for rediscount or as collateral for an advance, but also the general position of the borrowing bank, the volume and character of its outstanding loans

¹³ *Annual Report of the Federal Reserve Board*, 1923, pp. 3-4.

and investments, and to some extent the character of its management" were considered by some of the Federal Reserve banks.¹⁴

The annual report for 1938. — *The Annual Report of the Board of Governors of the Federal Reserve System*, 1938, contains a lengthy discussion of the whole problem of bank supervision. This report is interesting, not only because it recognizes that confusion still exists in this matter of bank supervision, but also because it presents the relationship between supervisory and credit policies. It suggests, therefore, that supervision may be an instrument of control.

Allocations of authority. — This report calls attention to the confusion of jurisdiction in the supervision of different groups of banks, as follows:

Supervision and regulation of banks differ materially from State to State as well as between banks that are chartered by States and those that are chartered by the Federal Government. Even within the Federal Government there is extensive diversity, overlapping, and confusion of jurisdiction in the regulation and supervision of different groups of banks. There are five Federal agencies engaged in bank supervision. Prior to 1933, Federal supervision of the commercial banking system, in so far as it was subject to such supervision, was in the hands of the Comptroller of the Currency and the Federal Reserve Board. Since 1933 there has been added the Federal Deposit Insurance Corporation, which exercises broad supervisory powers. Certain powers of the Reconstruction Finance Corporation also give it a measure of responsibility for the operation of banks, and the Secretary of the Treasury, through the exercise of authority under the President's emergency powers, licenses the operation of member banks and has authority to exercise other regulatory powers.¹⁵

After mentioning numerous examples of confusion and conflicts of authority, the Board continues with its criticisms as follows:

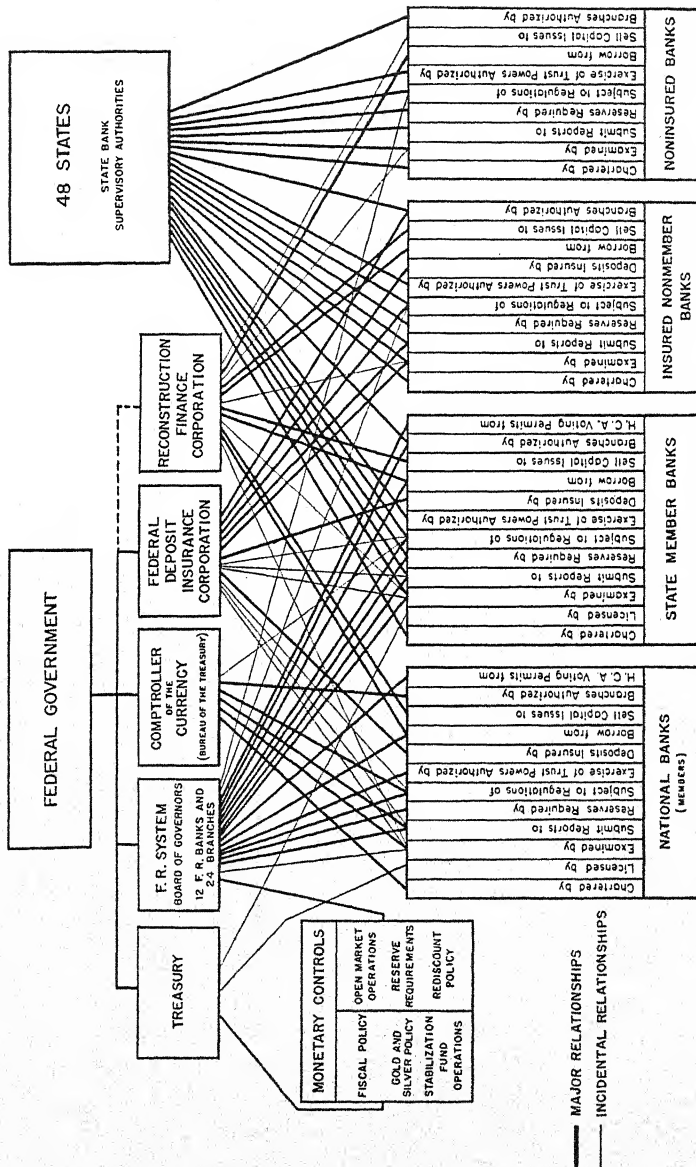
While duplication in reports and examinations by different Federal agencies is largely avoided by cooperative arrangements, nevertheless delays and difficulties arise from the overlapping of responsibility. Even after an agreement is reached, there may be, and in fact, there are, differences of interpretation of the procedure, formula, or policy agreed upon.

For example, after lengthy negotiations a voluntary agreement between the agencies in connection with examination policy was reached last summer (1938). The effectiveness of this agreement, however, depends, in the first place, on the continuance of cooperation between the agencies and, in the second place, on the nature of interpretations placed by the different agencies on the agreed principles of examination. A similarity of interpretation is

¹⁴ *Annual Report of the Federal Reserve Board*, 1925, p. 18.

¹⁵ *Annual Report of the Board of Governors of the Federal Reserve System*, 1938, pp. 11-12.

PRINCIPAL BANK SUPERVISORY RELATIONSHIPS



Source: Annual Report of the Board of Governors of the Federal Reserve System, 1938, p. 9

Fig. 30

difficult to attain because the agencies have different responsibilities and, therefore, different approaches to the problem. The Comptroller of the Currency is primarily a supervisory and examining agency and is interested principally in matters affecting the status of individual banks. The Federal Deposit Insurance Corporation is primarily an insurance agency and is, therefore, primarily concerned about the protection of the insurance fund. The Board of Governors, in addition to its supervisory responsibilities, is concerned with national credit and monetary policies, and is, therefore, interested in supervisory policies that are in conformity with credit policies. Such policies must look not only to the status of individual banks and the safeguarding of the interests of depositors, but also to the maintenance of sound credit conditions in the aggregate and a sound banking system, without which credit policies cannot be effectively put into operation.

While the ultimate objective of all the agencies concerned is a sound banking condition and an unimpeded flow of funds to finance commerce, industry, and agriculture, the different points of approach to the problem by the different agencies inevitably lead to differences in emphasis in the interpretation of principles of policy.¹⁶

Relation between supervisory and credit policies. — In the same report the Board raises a number of questions, none of which is answered. Among the questions are the following:

1. What effect does bank supervision have on changes in the outstanding volume of bank credit?
2. What influence do examinations have on the expansion or contraction of credit during the different phases of the business cycle?
3. Should examination policy be so directed as to contribute to the protection of the general economy from the effects of undue expansion or contraction of credit?
4. What distinction, if any, exists between the considerations upon which a sound national credit policy should be based and the measures that should be taken to insure the soundness of individual banks?
5. Is harmony between examination policies and credit policies necessary to the discharge of the responsibilities of the agencies vested with authority to determine these policies?

The third question is particularly interesting because it suggests that examination policies might be used by supervisory authorities to encourage extension of sound credit, when such extension of credit may be helpful to the national economy, and to discourage credit

¹⁶ *Annual Report of the Board of Governors of the Federal Reserve System*, 1938, pp. 15-16.

extension at other times. A reasonable interpretation of this report, therefore, is that the Board of Governors now believes that authority should be definitely delegated by Congress to some agency to make examination policies coincide with other instruments of control to achieve "increased national economic stability."

Other instruments of control. — Other instruments of control which might have been included in the foregoing discussion are (1) the determination of margin requirements on speculative transactions through brokers, and (2) the process of sterilization of gold imports. The former has been discussed as adequately as the scope of this text will permit in Chapter XI, and the latter is reserved for discussion in Chapter XXVIII, The Treasury and the Money Market.

APPRAISAL OF THE INSTRUMENTS OF CREDIT CONTROL

Any attempt to determine the effectiveness of the instruments of credit control of the central banks must first consider just what may be expected from the use of these instruments. If we take the view that central banks should control the level of short-term interest rates and eliminate the seasonal swings in these series, we can readily affirm the success of the instruments. If more ambitious schemes are to be the basis of our appraisal, then the answer can be less definite. During the period of price stability of the 1920's, it was frequently stated that the Federal Reserve Board had succeeded in stabilizing prices. This has since proved illusory.

Some of the guides which have been suggested would require even more power for their enforcement than is now available in the hands of the monetary authorities. In fact, some of these guides are of such a nature as to require more than monetary control. Many of the significantly disturbing changes in prices are nonmonetary and are, therefore, not amenable to the instruments now held by the central banks. It is questionable whether they could be brought under control by the use of monetary techniques.

Despite the enumeration of the specific weaknesses of each of the instruments of credit control in the hands of the Federal Reserve authorities, it should not be assumed that they are entirely impotent under all circumstances. There may be occasions when one of these instruments, or a combination of them, will produce the desired effects. Open-market operations, for example, have been

used effectively to ease strain in the market for government bonds. Higher or lower margin requirements have had a desirable effect on the market for speculative stocks. Higher rediscount rates have aided in protecting the reserve position of the Federal Reserve banks. In general, a specific instrument may be efficacious in remedying a specific state of the money market, even though it cannot be relied upon in all circumstances.

It must also be admitted that the Federal Reserve System has been able to reduce materially the range of fluctuations of short-term interest rates and regional differences in money rates as compared with the results achieved by the poorly organized banking system of the United States prior to 1914. It has been able to meet unusually severe drains of both internal and external origin with a minimum of disturbance. A case in point with respect to the latter condition was the rapid drain of gold in September 1931, after the departure of England and other countries from the gold standard. Perhaps further improvements in the organization of our banking system and further experience in the use of new and old instruments of control will produce more beneficial results in the future. The Federal Reserve System has fulfilled some of the purposes for which it was created, while many of its shortcomings should be measured in terms of new demands upon it.

SUGGESTIONS FOR FURTHER READING

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CHAPTER XXVII

THE FEDERAL RESERVE BANKS AND THE MONEY MARKET

Introduction. — In previous chapters, brief analyses have been presented of possible guides to central bank policy and instruments of credit control. The present chapter is concerned with the relationship between the Federal Reserve banks and the money market. Its purpose is to reveal the application of the instruments of control to the factors of supply and demand in the money market as a whole or to the specific parts of which it is composed. In previous chapters, the guides to and the instruments of credit control have been examined somewhat in the abstract; the present chapter will show the actual responses of the Federal Reserve banks to a multitude of forces.

The application of the various instruments of control is presumably predicated upon some general theory which is entertained by those persons who formulate policy. The focus of this policy has changed as the Federal Reserve Board or the Board of Governors of the Federal Reserve System has encountered new problems with changing conditions in the money market and in the economic system as a whole. We begin, therefore, with a brief statement of the earlier interpretation of the Federal Reserve Act by the Federal Reserve Board and some broad changes in policy in later years, before setting forth a method of analysis of the relationship between the Federal Reserve banks and the money market.

THE CHANGING CONCEPTS OF FEDERAL RESERVE FUNCTIONS

The Federal Reserve System was designed to overcome the most obvious defects of the banking system which it superseded. Among its chief purposes that of developing a greater degree of elasticity of currency and credit was paramount. This purpose was to be fulfilled through policies formulated "with a view of accommodating commerce and business." The Federal Reserve Board, in oft-repeated statements, preached the doctrine which it was enjoined

to adopt as its guide. The Federal Reserve Board said in 1919 that "... the occasion of the issue of a Federal Reserve note is determined not *by* the bank for itself but *for* the bank by the community."¹ With respect to the effect of credit upon prices, the Board frequently asserted that the extension of credit was the result, not the cause, of price changes, although it was admitted that "it is difficult to say which is more cause and which is more effect."² Thus Federal Reserve credit and notes would flow in and out of the money market as the need for accommodation waxed and waned in accordance with business conditions.

In other words, expansion and contraction of Federal Reserve notes and credit were to be largely automatic in character. Thus we find in the Federal Reserve Act an implied allegiance to a *laissez-faire* doctrine and a counterpart of the automatic functioning of the international gold standard. To be sure, certain "rules of the game" were to be observed. The Federal Reserve banks were obliged to protect bank reserves, to maintain the redeemability of bank notes, and to establish standards by which eligibility of paper for rediscounting could be determined. The philosophy of control, however, was subordinate to the philosophy of accommodation. Such control as might become necessary was to be exercised with a view to maintaining the integrity of the doctrine of accommodation which relied on the good judgment of bankers and businessmen concerning the quantity of credit that should, within the rules, be extended by member banks. This rather literal, perhaps too literal, interpretation of the precepts of the framers of the Federal Reserve Act gradually gave way to a philosophy of control just as the foundations of the international gold standard weakened and other departures from a *laissez-faire* economic doctrine became more and more numerous.

Although it is very difficult to differentiate the passive attitude of the Federal Reserve banks which is expressed in the injunction that they formulate policy "with a view of accommodating commerce and business" from active control of the money market, the preponderance of evidence points to the passive attitude as the guiding principle of the Federal Reserve Board during the early years of the Federal Reserve System.

¹ *Federal Reserve Bulletin*, 1919, p. 814.

² *Ibid.*, October 1919, pp. 911-912.

The traditional view of liquidity. — The “philosophy of accommodation” which has been described is synonymous with what is often called the “automatic functioning” of the Federal Reserve System in supplying currency and credit to the member banks. The same meaning is conveyed by such expressions as “the essential liquidity of short-term commercial loans.” The ideas behind these three expressions are in reality a single idea which, for want of a better name, we shall call the “passive” concept of Federal Reserve functions. The assumption that commercial loans are liquid and that other bank loans are not liquid, led to legislation and regulations forbidding the rediscounting of any paper other than short-term commercial paper for commercial, productive purposes. This type of paper would, it was assumed, rise and fall in volume as business activity expanded and contracted. Through the rediscounting process, the Federal Reserve banks would more or less automatically expand and contract credit and bank notes with the needs of business.³ Business would then be accommodated with the desired and desirable volume of legitimate credit.

This traditional view of liquidity of bank assets, which received a great deal of academic support, was inherited by the Federal Reserve System, whose chief purpose it was to provide more adequate machinery for the functioning of the theory. The Federal Reserve System, however, immediately encountered the exigencies of the World War which forced the Reserve authorities and the member banks to deviate from the prevailing concept of ideal banking practice. The close of the World War was hailed in banking circles as providing the opportunity to return to sounder practices. The postwar decline in the prices of government bonds and in the values of real estate seemed to lend ample support to the view that commercial banks should adhere strictly to commercial banking. In practice, however, the return to prewar concepts was far from complete, because a tendency toward a decline in commercial paper eligible for rediscount with the Federal Reserve banks became a notable feature of banking in the 1920's.

The trend toward the shiftability theory. — Perhaps the chief reason for the decline in commercial loans is that the integration of

³ The phrase, “the needs of business,” is frequently encountered in descriptions of the functioning of the Federal Reserve System, although it may have little meaning apart from some assumption with respect to a price level.

business firms into larger units has enabled these larger business units to provide themselves with adequate working capital without borrowing from commercial banks. The development of widespread public interest in securities and the ease with which funds could be obtained in the securities markets led business firms to resort to those markets to obtain such funds as they needed. This development was accompanied by (1) a large increase in the loans of commercial banks on securities, (2) the participation of some commercial banks in the under-writing and marketing of long-term securities through their investment affiliates, and (3) the growing reliance of these banks on the ability to shift their assets to the open market.

In 1929, for example, the member banks did not rely upon the rediscounting of customers' paper as a means of further increasing their loans to customers. They relied instead on selling their long-term assets in the open market and adjusting their holdings of short-term open-market paper in such manner as to enable them to increase their loans to customers. Most of the increase in customers' loans in that year was in two categories, namely, loans to brokers to carry margin-account customers and loans to individual borrowers for purchasing and carrying stocks and bonds.

In the period 1920-1929, all national banks increased their investment assets from 42.3 per cent of all earning assets to 61.5 per cent.⁴ Holdings of rediscountable paper by all national banks decreased from 30.2 per cent of total loans in 1923 to 20.1 per cent in 1929.⁵ Marriner S. Eccles, chairman of the Board of Governors of the Federal Reserve System, testified in the hearings on the Banking Act of 1935 that rediscountable paper held by member banks was estimated at 8 per cent of the total amount of paper held by them in 1935.

At the beginning of the depression of the 1930's, the commercial banks increased their holdings of bonds as their loans to customers declined. Evidently it was assumed that high-grade bonds constituted a better protection for deposits than customers' paper. When, however, depositors began to convert their deposit credits into cash in large volume and banks were forced to sell bonds, it

⁴ Willis, H. P., *The Theory and Practice of Central Banking*, p. 119. New York: Harper & Brothers, 1926.

⁵ *Ibid.*, p. 120.

soon became clear that a general "shiftability" to the open market with little or no loss was impossible. Ability to shift long-term assets to the open market is possible for the individual bank only so long as some other bank can withstand the withdrawal of deposits with which the "shiftable" assets of the first bank are purchased. Not all banks can do this at the same time. The shiftability theory, which had largely supplanted the earlier reliance on the liquidity of the short-term loans to customers, failed to meet the pragmatic test.

Shiftability to the Federal Reserve banks. — In circumstances such as have been outlined, namely, the attempted general shifting of bank assets to the open market in the early 1930's, one of two courses of action might be taken. The liquidation might be allowed to run its course, according to the *laissez-faire* concept, or some central authority might intervene in an attempt to support the existing market values of the current bank loans and investments. Of course, the choice might not be clear-cut, since some liquidation might be allowed to take place or might occur despite attempted market support.

The Banking Act of 1933, passed after a severe slump in business activity and in the market values of most types of property, was based on the supposition that the difficulties that were encountered after 1929 were largely the consequences of the departure, in the previous decade, from traditional banking policies. The framers of this act believed that a return to the concepts entertained by the founders of the original Federal Reserve Act would provide the basis for a sound recovery movement. The Banking Act of 1935, however, rejected the liquidity theory inherent in the Banking Act of 1933 and provided for a more complete support by the Federal Reserve banks of the long-term assets of the member banks.⁶ This support does not extend to a guarantee against loss to the member banks, but the Reserve banks now may advance funds to member banks on any satisfactory security. In the case of bonds, the new appraisal policies provide that Group I bonds, that is high-grade investments, may be carried at cost, and that neither depreciation nor appreciation will be shown in computing the net sound capital of a member bank. Government bonds can be used

⁶ See *Senate Hearings on the Banking Act of 1935*, pp. 209-236.

at their par value as security for an advance by a Federal Reserve bank to both member and nonmember banks.

Thus, recent legislation and central bank policy have made it unnecessary for the member banks to rely as completely as before on either the liquidity of their assets or on their shiftability to the open market. Instead they may rely to a greater extent on the shiftability of their assets to the Federal Reserve banks. When banks might wish to sell securities in the open market in order to meet an emergency, it has become the policy of the Federal Reserve banks to influence the market so as to prevent, as far as possible, the liquidation of member-bank and nonmember-bank assets under adverse market conditions.

A recognition of the necessity of this policy was made by the Board of Governors in its annual report for 1939. The outbreak of the war in Europe in September 1939 was accompanied by fears of a disturbance in the market for United States government securities. The action of the Board of Governors in this situation is set forth clearly in the following quotation from its 1939 report:

In undertaking large-scale open-market operations in September 1939, the System was guided principally by the following considerations:

(1) By helping to maintain orderly conditions in the market for United States Government securities the System can exert a steadying influence on the entire capital market, which is an essential part of the country's economic machinery, and disorganization in which would be a serious obstacle to the progress of economic recovery. The market for United States Government securities is the only part of the capital market in which the System is authorized by law to operate, and Government securities occupy a vital place in that market.

(2) The System also has a measure of responsibility for safeguarding the large United States Government portfolio of the member banks from unnecessarily wide and violent fluctuations in price. The System cannot and does not guarantee any current prices of Government obligations, nor does it undertake to preserve for member banks such profits as they may have on their Government securities, or to protect them against losses in this account. The Government security market, however, has become in recent years the principal part of the money market, and member banks are in the habit of adjusting their cash positions through sales and purchases of United States Government securities. This practice has arisen partly because of a shrinkage in the availability of other liquid assets, such as Street loans and bankers' acceptances, which in earlier years were in much larger volume and were the medium through which banks were likely to adjust their positions. In the enhanced importance of the Government portfolio to member banks, the System sees an additional reason for

exerting its influence against undue disturbances in Government security prices.⁷

The amortization of claims. — It has been seen that the Federal Reserve banks may rediscount any satisfactory asset for a member bank and extend credit to it up to the par value of government bond security. This permission allows the member banks to shift their long-term assets to the Reserve banks in the normal course of business or in a crisis. However, it is plainly in the interest of the Federal Reserve banks not to have the member banks unload a large amount of bonds at one time. Neither would the Reserve banks be pleased to have the member banks rediscount satisfactory assets in great volume over any considerable period of time. Instead, it is in the interest of the Federal Reserve banks to encourage member banks to hold most of their assets until maturity.

In the case of the long-term loans of member banks, it seems desirable that they be handled on an amortization basis. In many cases, bank examiners recommend that this be done. If these loans are amortized, banks can space the maturities so as to derive a fairly steady income from them. A partial answer, therefore, is provided the critics of the present trend toward the substitution of long-term for short-term loans in the portfolios of commercial banks. The combination of federal deposit insurance and the rediscountability of sound assets is likely to offer as much, if not more, protection to the depositors and to banks themselves than the traditional reliance on the short-term commercial loan. Of course, banks will not, by reason of these considerations, ignore the short-term loans if they are obtainable.

In the case of the long-term bonds which banks hold, it seems desirable that the premiums paid be amortized and that reserves against depreciation be maintained at reasonable levels. When member banks know that the Federal Reserve banks stand ready to support the bond market, especially the market for government securities, and they themselves possess some reserves against depreciation in bond values, the danger of general liquidation is minimized. The development of this policy toward the bond holdings of banks is a recognition of the fact that general liquidation in a crisis is impossible.

⁷ *Annual Report of the Board of Governors of the Federal Reserve System*, 1939, pp. 5-6.

Summary. — Before entering upon a presentation of Federal Reserve policy in action in recent years, a summary of the general theoretical background of that policy as it has changed its focus with the changing position of the commercial banks in our economic system may be stated in broad terms as follows: (1) It was assumed at the time of the establishment of the Federal Reserve System that the short-term commercial loan should provide the chief protection for bank deposits. The World War, which broke out in 1914, interfered with the traditional concept of the proper functioning of a central banking system. The end of the war brought hopes for a return to a policy consistent with these traditional concepts. The decade which followed, however, was characterized by great activity in the security markets and a tremendous increase in the volume of both customers' and open-market loans on security collateral. (2) By 1929 shiftability of commercial bank assets to the open market had in large part supplanted a reliance on the natural liquidity of the short-term commercial loan as the support for bank deposits. (3) The early 1930's demonstrated the impossibility of general liquidation in the open market in a crisis, assuming that liquidity means an ability to shift an asset with little or no loss. (4) The framers of the Banking Act of 1933 interpreted the breakdown in shiftability to the open market as being a consequence of the abandonment of adherence to the traditional commercial banking practices. The Banking Act of 1935 offered an alternative to shiftability to the open market, namely, shiftability to the Federal Reserve banks. In the event of uncertainty or financial crisis, the incidence of general liquidation is to fall upon the Federal Reserve banks. It is the present hope of the Board of Governors of the Federal Reserve System that commercial banks can be encouraged, by revision of bank examination procedures, by open-market support to the market for government securities, etc., to hold their assets until maturity. One of the means to this end is the practice of amortization of long-term loans and bond premiums.

FEDERAL RESERVE BANK CREDIT

Introduction. — On Friday morning of each week, there are published in many newspapers the so-called Wednesday figures of

TABLE 41. PRINCIPAL ASSETS AND LIABILITIES OF ALL
FEDERAL RESERVE BANKS

(In thousands of dollars)

	1940			1939
	June 19	May 31	April 30	May 31
<i>Assets</i>				
Gold certificates on hand and due from United States Treasury....	17,536,475	16,983,476	16,417,976	13,317,722
Redemption fund — Federal Reserve notes.....	11,191	11,021	9,639	8,547
Other cash.....	371,023	351,882	381,193	346,667
Total reserves.....	17,918,689	17,346,379	16,808,808	13,672,936
Bills discounted:				
For member banks.....	2,182	2,815	1,694	4,058
For nonmember banks, etc....	10	10	1,010	.....
Total bills discounted.....	2,192	2,825	2,704	4,058
Bills bought:				
Payable in foreign currencies.....	.....	.....	.....	561
Industrial advances.....	9,011	9,149	9,357	12,487
United States government securities, direct and guaranteed:				
Bonds.....	1,343,183	1,346,995	1,337,495	911,090
Notes.....	1,130,125	1,130,125	1,129,225	1,176,109
Bills.....	.....	.....	.....	476,816
Total United States government securities, direct and guaranteed.....	2,473,308	2,477,120	2,466,720	2,564,015
Other Reserve Bank credit.....	54,411	29,855	39,125	— 8,291
Total Reserve Bank credit outstanding.....	2,538,922	2,518,949	2,517,906	2,572,830
<i>Liabilities</i>				
Federal Reserve notes in actual circulation.....	5,103,916	5,057,064	4,941,165	4,476,764
Deposits:				
Member bank — reserve account.....	13,712,233	13,236,768	12,918,586	10,029,054
United States Treasurer — general account.....	298,212	364,757	446,408	920,325
Foreign bank.....	659,828	428,380	367,239	284,806
Other deposits.....	438,487	544,764	420,200	301,130
Total deposits.....	15,108,760	14,574,669	14,152,433	11,535,315
Ratio of total reserves to deposit and Federal Reserve note liabilities combined (per cent).....	88.7	88.4	88.0	85.4

Source: *Federal Reserve Bulletin*, July 1940, p. 685.

the principal assets and liabilities of all Federal Reserve banks. This is one of a series of data issued by the Federal Reserve System which series comprise the most complete statement of operations of any central banking system in the world. Other significant figures are those relating to the use of funds by the member banks, which figures are published in the *Federal Reserve Bulletin* under the title, "Condition of All Member Banks." These two series, when compared, reveal to some extent the current business situation and the effect of Federal Reserve operations on the money market.

The explanations and interpretations of the data which are hereafter presented, provide the reader with an opportunity to view the applications of the instruments of credit control by the Federal Reserve banks and the reactions of the member banks to such control in the rapidly changing conditions from 1928 to 1939.

The Federal Reserve statement. — Table 41 shows the combined assets of the twelve Federal Reserve banks as of a recent date. This statement is supplemented by data on "Member-Bank Reserves, Reserve Bank Credit, and Related Items" which makes possible a balance-sheet computation of the effect of the operations of the Federal Reserve banks on member-bank reserves.

In order to set forth the balancing character of these data, the changes in member-bank reserves, Federal Reserve bank credit, and related items are given for two recent dates:

	June 19, 1940	May 1, 1940
Bills discounted	\$ 2,000,000	\$ 3,000,000
Bills bought	0	0
United States government securities	2,473,000,000	2,467,000,000
Other reserve bank credit	63,000,000	30,000,000
Gold stock	19,769,000,000	18,771,000,000
Treasury currency outstanding	3,011,000,000	3,000,000,000
Money in circulation	7,741,000,000	7,570,000,000
Treasury cash holdings	2,204,000,000	2,293,000,000
Treasury deposits with Federal Reserve banks	298,000,000	490,000,000
Nonmember deposits	1,098,000,000	793,000,000
Other Federal Reserve accounts	266,000,000	256,000,000
Member-bank reserve balances	13,712,000,000	12,870,000,000

The changes in these data may be computed in terms of funds made available to the money market and funds withdrawn from the money market as follows:

Funds were made available to the money market through

1. An increase in gold stock	\$ 998,000,000
2. An increase in Treasury currency outstanding	11,000,000
3. An increase in United States government securities held by the Federal Reserve banks	6,000,000
4. An increase in other Federal Reserve bank credit	33,000,000
5. A decrease in Treasury deposits with the Federal Reserve banks	192,000,000
6. A decrease in Treasury cash holdings	89,000,000
Total	<u>\$1,329,000,000</u>

Funds were withdrawn from the money market through

1. A decrease in bills discounted	\$ 1,000,000
2. An increase in money in circulation	171,000,000
3. An increase in nonmember deposits	305,000,000
4. An increase in other Federal Reserve accounts	10,000,000
Total	<u>\$487,000,000</u>

The difference between the factors of increase and the factors of decrease in funds made available is reflected in an increase in member-bank reserve balances

\$842,000,000

This statement is in effect a consolidated balance sheet of Federal Reserve bank credit and related items, the balancing character of which is implicit in the accounting method by which it is derived. The items are all interrelated, and changes in any one of them can be accounted for by balancing changes in all the others. It will be observed that the difference in amount between those factors which increase the funds made available to the money market and those which result in the withdrawal of funds from the money market is reflected in a corresponding change in member-bank reserve balances. The interrelationship of the various factors is explained in detail in the *Federal Reserve Bulletin* for July 1935. The following explanations are a condensation of this rather exhaustive analysis.

Interrelationship of the various factors. — The items may be classified according to whether changes in them are primarily and directly caused by actions of (1) the member banks, (2) the Federal Reserve banks, or (3) outside influences, such as gold movements, money in circulation, Treasury cash and deposits with Federal Reserve banks. A change in which the initiative is supplied by the member banks is that which takes place in volume of discounted bills held by the Federal Reserve banks. Changes in which the initiative is supplied by the Federal Reserve banks may be illustrated by Reserve bank purchases of securities in the open market.

A few illustrations of the interrelationship of these various items will suffice. When member banks have used most of their available reserves, they may borrow from the Federal Reserve banks to finance additional expansion. When member banks are almost entirely out of debt to the Federal Reserve banks, any increase in the funds made available to the money market through an increase in gold stock, Reserve bank holdings of bills, and securities, etc., is reflected in increases in the reserve balances of member banks. Further explanations of changes which increase or decrease the funds available to the money market are presented in connection with the description of each item given below.

Bills discounted represent, principally, rediscounts for and advances to member banks. It is the amount of Federal Reserve credit in use that is called for by the member banks. The size of this item, however, does not give a complete picture of the credit situation at any one time. When most member banks are out of debt at the Reserve banks, the amount of their excess reserves becomes an important factor for consideration. *An increase in bills discounted makes funds available to the money market, while a decrease in this item withdraws funds from the money market.*

Bills bought represent bankers' acceptances purchased by Federal Reserve banks in the open market from bill dealers or banks, either outright or under resale agreements, and acceptances payable in foreign currencies purchased from foreign central banks and guaranteed by them. Increases or decreases in this item do not always represent Federal Reserve credit policy because the initiative in buying them is not always taken by the Federal Reserve banks. The Reserve banks can, of course, change the rate at which they will buy them, but while the rate remains unchanged, the initiative is taken by others in selling them freely to the Reserve banks or withholding them from the Reserve banks. *An increase in bills bought makes funds available to the money market, while a decrease in this item withdraws funds from the money market.*

United States government securities largely reflect Federal Reserve open-market policy. There were some exceptions to this general statement prior to the Banking Act of 1935, which legislation requires that all purchases and sales of government securities by the Reserve banks shall be in the open market. *An increase in Federal Reserve banks' holdings of United States government securities*

makes funds available to the money market, while a decrease in this item withdraws funds from the money market.

Other Reserve bank credit includes funds held on deposit for foreign banks, advances made for the purpose of providing working capital to industrial and commercial concerns (the so-called industrial advances recently permitted by an amendment to the Federal Reserve Act), and Federal Reserve bank float, which arises through transit items that are credited to the account of depositing banks prior to their actual collection by the Reserve bank. *An increase in "other Reserve bank credit" makes funds available to the money market while a decrease in this item withdraws funds from the money market.*

Gold stock includes at the present time only gold held by the Treasury. Prior to January 30, 1934, monetary gold stock included gold held by the Treasury and by the Federal Reserve banks, except gold earmarked for foreign account, and also included gold in circulation in the United States. On January 30, 1934, title to all gold held by Federal Reserve banks was transferred to the United States Government. The Federal Reserve banks now hold gold certificates or gold certificate credits on the books of the Treasury against which the Treasury holds gold. On June 19, 1940, the Federal Reserve statement showed "gold certificates on hand and due from U. S. Treasury" of \$17,536,475 while the item "Monetary gold stock" of the Treasury amounted to \$19,871,000,000. The difference between these two items consists of the unused balance of the Stabilization Fund set up by the Gold Reserve Act of 1934, gold reserves against United States notes, and other gold held in the general fund of the Treasury. *An increase in monetary gold stock, unless sterilized, makes funds available to the money market, while a decrease in this item withdraws funds from the money market.*

Treasury currency outstanding measures the contribution of the Treasury to the currency supply of the country. It represents the stock of money for which the Treasury is primarily responsible, comprising standard silver dollars, silver bullion against the pledge of which silver certificates and Treasury notes of 1890 are outstanding, subsidiary silver and minor coin, United States notes, national bank notes, and Federal Reserve bank notes for the retirement of which funds have been deposited with the Treasurer of the United States. Since national bank notes, included in this category for convenience only, are being retired, all types of currency included

in this item will be, more strictly speaking, Treasury currency. Silver certificates have accounted for most of the increase in this item in recent years due to the operation of the Silver Purchase Act of 1934. *An increase in Treasury currency outstanding makes funds available to the money market, while a decrease in this item withdraws funds from the money market.*

Money in circulation includes all kinds of money outside the Federal Reserve banks and the Treasury, with the exception that gold coin known to have been exported was always excluded and beginning January 31, 1934, all gold coin outstanding has been excluded. The figures include, therefore, not only money held by the public but vault cash held by banks and such United States money as may have been carried abroad, other than gold coin known to have been exported. *An increase in money in circulation withdraws funds from the money market, while a decrease in this item makes funds available to the money market.*

Treasury cash represents the cash assets which the Treasury has at its disposal without drawing on balances with depository banks. It includes gold bullion, silver and minor coin, and currency held in the Treasury, excepting (1) gold held against gold certificates, (2) silver held against silver certificates and Treasury Notes of 1890, and (3) gold held for Federal Reserve banks. Treasury cash was increased by \$2,800,000,000 after the close of business on January 31, 1934, as a result of reduction in the gold content of the dollar. *An increase in Treasury cash holdings withdraws funds from the money market, while a decrease in this item makes funds available to the money market.*

Treasury deposits with Federal Reserve banks represent the working balance of the government against which it draws checks for current payments. When these deposits decline, they may be restored by selling new securities for cash or by transferring from depository banks deposit credits which have previously been created by the sale of government securities. In recent years, these withdrawals from the depository banks have been made by a reduction in the excess reserves of those banks. *An increase in Treasury deposits with Federal Reserve banks withdraws funds from the money market, while a decrease in this item makes funds available to the money market.*

Nonmember deposits include all deposits with the Federal Reserve banks except the Treasury general-account and member-bank re-

serve balances. This item includes deposits for nonmember banks and for others, for example, foreign central banks and governments. In 1933 and 1934 it also included special deposits held for unlicensed member and nonmember banks. *An increase in nonmember deposits withdraws funds from the money market, while a decrease in this item makes funds available to the money market.*

Other Federal Reserve accounts, formerly designated as "unexpended capital funds of Federal Reserve banks," is derived from the condition statement of the Federal Reserve banks by adding "capital," "surplus," "reserve for contingencies," and "all other liabilities" of the Reserve banks, and subtracting the sum of "bank premises" and "all other assets." *An increase in other Federal Reserve accounts withdraws funds from the money market, while a decrease in this item makes funds available to the money market.*

Member-bank reserve balances are the net balances which member banks have on deposit with the Federal Reserve banks. Since August 1917, only balances with the Federal Reserve banks have counted as legal reserves of member banks. Excess reserves represent the difference between reserves actually held and the required reserves. When excess reserves are present in great volume, increases and decreases in their amount reflect in large measure the net effect of many factors in Reserve bank credit and related items. When the net effect of these factors is a withdrawal of funds from the money market, excess reserves decline, while an increase in the funds available to the money market results, temporarily at least, in accretions to excess reserves.

MEMBER-BANK STATISTICS

Beginning with the call date, October 3, 1928, the member banks of the Federal Reserve System have been required in their reports to the Federal Reserve Board, to classify their loans in such manner as to differentiate between open-market loans and loans to customers. Prior to that date, there existed no means by which changes in the amount of loans to customers could be compared accurately with changes in the amount of the open-market loans of member banks. The new data may be used to show the extent to which member banks use the rediscounting privilege and the liquidation

of their open-market commitments as means of increasing the volume of loanable funds made available to their customers. Thus we are able to visualize with greater adequacy the relationship between Federal Reserve policy and member-bank loan and investment policy.

The technique which will be followed in stating this relationship is to present, first, the factors of change in Federal Reserve bank credit and, second, the changes in loans and investments of member banks during approximately the same periods. Since a complete presentation of factual materials from October 1928 to the present would consume too much space, only four periods are chosen for brief analysis. These are (1) a part of a period of expansion, October 3, 1928 to October 4, 1929, (2) a part of a period of contraction, October 4, 1929 to September 24, 1930, (3) a part of a period of recovery, June 30, 1936 to June 30, 1937, and (4) the year 1939. One of the dangers of this procedure is that the choice of periods for analysis determines the results which are obtained. It should be clearly understood, therefore, that the following material is selected chiefly for the purpose of illustrating a technique of analysis and presentation which the reader may apply to any period he chooses.

TABLE 42. FEDERAL RESERVE BANK CREDIT AND RELATED ITEMS

(October 3, 1928 to October 4, 1929)

Funds were made available to the money market through	
1. An increase in monetary gold stock	\$249,000,000
2. An increase in other Federal Reserve bank credit	21,000,000
3. A decrease in Treasury cash holdings	2,000,000
4. A decrease in nonmember deposits	4,000,000
Total	<u>\$276,000,000</u>
Funds were withdrawn from the money market through	
1. A decrease in bills discounted	\$128,000,000
2. A decrease in bills bought	13,000,000
3. A decrease in United States securities	97,000,000
4. An increase in currency in circulation	32,000,000
5. An increase in Treasury deposits with Federal Reserve banks	3,000,000
6. An increase in other Federal Reserve accounts	50,000,000
Total	<u>\$323,000,000</u>
Member-bank reserve balances decreased	<u>\$ 49,000,000</u>

Constructed from the following data which are found in the *Annual Report of the Board of Governors*, 1937, pp. 47-48:

<i>Reserve Bank Credit and Related Items</i>	<i>Oct. 3, 1928</i>	<i>Oct. 4, 1929</i>
Bills discounted	\$1,026,000,000	\$ 898,000,000
Bills bought	310,000,000	297,000,000
United States government securities	231,000,000	134,000,000
Other Reserve bank credit	64,000,000	85,000,000
Gold stock	3,838,000,000	4,087,000,000
Treasury currency outstanding	2,010,000,000	2,010,000,000
Currency in circulation	4,520,000,000	4,552,000,000
Treasury cash holdings	206,000,000	204,000,000
Treasury deposits with Federal Reserve banks	33,000,000	36,000,000
Nonmember deposits	32,000,000	28,000,000
Other Federal Reserve accounts	339,000,000	389,000,000

TABLE 43. LOANS AND INVESTMENTS OF MEMBER BANKS
(October 3, 1928 to October 4, 1929)

Loans to customers (except banks) — total		Increased	\$2,009,000,000
To brokers outside New York City	+ \$ 89,000,000		
To others on securities	+ 1,374,000,000		
Real estate loans	+ 63,000,000		
Otherwise secured and unsecured	+ 481,000,000		
Open-market loans — total		Decreased	\$ 261,000,000
Acceptances payable in the United States	+ \$ 13,000,000		
Bills payable abroad	— 31,000,000		
Commercial paper bought	— 229,000,000		
Loans to brokers in New York City	— 14,000,000		
Investments — total		Decreased	\$ 855,000,000
United States government securities	— \$ 364,000,000		
Other securities	— 491,000,000		
Loans to banks — total		Increased	\$ 92,000,000
Loans and investments — total		Increased	\$ 985,000,000

Constructed from the following data which are taken from the *Annual Report of the Board of Governors*, 1936, p. 132:

<i>Loans and Investments of Member Banks</i>	<i>Oct. 3, 1928</i>	<i>Oct. 4, 1929</i>
Total loans and investments	\$34,929,000,000	\$35,914,000,000
Total loans to customers	21,240,000,000	23,249,000,000
To brokers outside New York City	850,000,000	939,000,000
To others on securities	5,796,000,000	7,170,000,000
Real estate loans	3,089,000,000	3,152,000,000
Otherwise secured and unsecured	11,507,000,000	11,988,000,000
Loans to banks	548,000,000	640,000,000
Acceptances payable in United States	80,000,000	93,000,000
Bills payable abroad	101,000,000	70,000,000
Commercial paper bought	457,000,000	228,000,000
Loans to brokers in New York City	1,899,000,000	1,885,000,000
United States government securities	4,386,000,000	4,022,000,000
Other securities	6,218,000,000	5,727,000,000

The most significant aspects of these data are: (1) the retirement of a considerable amount of member-bank indebtedness to the Reserve banks, (2) declining member-bank reserve balances, and (3) the increase in gold stock in greater amount than the decrease in Federal Reserve holdings of bills and securities. It is a well-known fact that the period under consideration witnessed a considerable expansion in business activity. How then could the member banks expand loans to customers and at the same time retire some of their indebtedness to the Reserve banks? The answer to this question is found in the data presented in Table 43.

Member-bank loans to customers increased in the period under survey by \$2,009,000,000, while they were retiring their indebtedness to the Reserve banks in the amount of \$128,000,000 and reducing their reserve balances in the amount of \$49,000,000. It is obvious, therefore, that the member banks did not derive the funds to increase their loans to customers from the Reserve banks.⁸ In other words, they did not resort to the rediscounting process to build up their reserve balances as a base for bank-credit expansion. Furthermore, the excess reserves of member banks were, at no time during the period, greater than the amount of the decrease in their reserve balances. Hence withdrawals of excess reserves do not explain the ability of member banks to expand their loans while reducing their indebtedness to the Reserve banks.

The explanation of this phenomenon is likely to be found partly in the reduction in the amount of the open-market paper and the investments held by member banks. The total reduction in these two items was \$1,116,000,000. Since most of the increase in loans to customers was in the nature of loans to brokers outside of New York City and to others on securities, the member banks must have loaned to brokers and others, on security collateral, the funds derived from the liquidation of their investment and open-market paper. As far as the commercial banks were concerned, these operations resulted simply in a shift from the direct ownership of long-term securities and open-market commercial paper to loans with security collateral. Insurance companies, as well as other investors, purchased bonds in large quantities during this period,

⁸ During the period October 10, 1927, to October 3, 1928, the member banks engaged in rediscounting freely as shown by an increase in bills discounted from \$446,000,000 to \$1,026,000,000.

while commercial banks were shifting their funds into other channels of speculation. That banks were shifting their assets in 1929, rather than creating a large volume of new-deposit credit, is shown by the fact that the average of net demand plus time deposits of member banks was lower in 1929 than in 1928.

The conclusion to be derived from this presentation of factual data is that Federal Reserve policy was not sufficiently effective during 1928-1929 to retard the flow of funds from member banks or other sources into speculative channels. Moral suasion and very tardy increases in rediscount rates do not seem to have accomplished their purposes.

TABLE 44. FEDERAL RESERVE BANK CREDIT AND RELATED ITEMS

(October 4, 1929 to September 24, 1930)

Funds were made available to the money market through

1. An increase in Federal Reserve bank holdings of United States government securities	\$ 468,000,000
2. A decrease in currency in circulation	404,000,000
3. An increase in gold stock	132,000,000
4. An increase in Treasury currency outstanding	16,000,000
5. A decrease in nonmember deposits	3,000,000
Total	\$1,023,000,000

Funds were withdrawn from the money market through

1. A decrease in bills discounted	\$ 731,000,000
2. A decrease in bills bought	99,000,000
3. A decrease in other Federal Reserve bank credit	61,000,000
4. An increase in Treasury cash holdings	9,000,000
5. An increase in Treasury deposits with Federal Reserve banks	7,000,000
6. An increase in other Federal Reserve accounts	2,000,000
Total	\$ 909,000,000

Member-bank reserve balances increased

\$ 115,000,000

Compiled from the following data which are found in the *Annual Report of the Board of Governors*, 1937, pp. 47-48:

<i>Reserve Bank Credit and Related Items</i>	<i>Oct. 4, 1929</i>	<i>Sept. 24, 1930</i>
Bills discounted	\$ 898,000,000	\$ 167,000,000
Bills bought	297,000,000	198,000,000
United States government securities	134,000,000	602,000,000
Other Federal Reserve bank credit	85,000,000	24,000,000
Gold stock	4,087,000,000	4,219,000,000
Treasury currency outstanding	2,010,000,000	2,026,000,000
Currency in circulation	4,552,000,000	4,148,000,000
Treasury cash holdings	204,000,000	213,000,000
Treasury deposits with Federal Reserve banks	36,000,000	43,000,000
Nonmember deposits	28,000,000	25,000,000
Other Federal Reserve accounts	389,000,000	391,000,000
Member-bank reserve balances	2,301,000,000	2,416,000,000

The significant features of these data shown in Table 44 are: (1) the increase in Federal Reserve bank holdings of government securities after the stock-market crash, (2) the decrease in money in circulation, (3) the very large decrease in member-bank indebtedness to the Reserve banks, (4) the decline in bill holdings of the Reserve banks, and (5) the building up of member-bank reserve balances.

TABLE 45. LOANS AND INVESTMENTS OF MEMBER BANKS

(October 4, 1929 to September 24, 1930)

Loans to customers		
(exclusive of banks) — total		Decreased \$2,239,000,000
Secured by stocks and bonds to		
brokers outside New York City	— \$ 165,000,000	
To other customers	— 80,000,000	
Secured by farmland	— 5,000,000	
Secured by other real estate	+ 16,000,000	
Otherwise secured and unsecured	— 2,006,000,000	
Open-market loans — total		Increased \$ 986,000,000
Purchased acceptances payable in		
the United States	+ \$ 112,000,000	
Purchased acceptances, etc., pay-		
able abroad	— 8,000,000	
Commercial paper purchased	+ 295,000,000	
Street loans	+ 587,000,000	
Investments — total		Increased \$ 985,000,000
United States government securities		+ \$ 73,000,000
Other securities		+ 912,000,000
Loans to banks — total		Decreased \$ 174,000,000
Loans and investments — total		Decreased \$ 442,000,000

Compiled from the following data which are found in the *Annual Report of the Board of Governors*, 1936, p. 132:

<i>Loans and Investments of Member Banks</i>	<i>Oct. 4, 1929</i>	<i>Sept. 24, 1930</i>
Total loans and investments	\$35,914,000,000	\$35,472,000,000
Total loans to customers	23,249,000,000	21,010,000,000
To brokers outside New York City	939,000,000	774,000,000
To others on securities	7,170,000,000	7,090,000,000
Real estate loans	3,152,000,000	3,163,000,000
Otherwise secured and unsecured	11,988,000,000	9,982,000,000
Loans to banks	640,000,000	466,000,000
Acceptances payable in United States	93,000,000	205,000,000
Bills payable abroad	70,000,000	62,000,000
Commercial paper bought	228,000,000	523,000,000
Loans to brokers in New York City	1,885,000,000	2,472,000,000
United States government securities	4,022,000,000	4,095,000,000
Other securities	5,727,000,000	6,639,000,000

TABLE 46. FEDERAL RESERVE BANK CREDIT AND RELATED ITEMS

(June 30, 1936 to June 30, 1937)

Funds were made available to the money market through:

1. An increase in bills discounted	\$ 6,000,000
2. An increase in bills bought	1,000,000
3. An increase in United States government securities	96,000,000
4. An increase in gold stock	1,710,000,000
5. An increase in Treasury currency outstanding	52,000,000
6. A decrease in Treasury deposits with Federal Reserve banks	597,000,000
Total	\$2,462,000,000

Funds were withdrawn from the money market through:

1. A decrease in other Federal Reserve bank credit	\$ 13,000,000
2. An increase in currency in circulation	206,000,000
3. An increase in Treasury cash holdings	948,000,000
4. An increase in nonmember deposits	23,000,000
5. An increase in other Federal Reserve accounts	4,000,000
Total	\$1,194,000,000

Member-bank reserve balances increased

\$1,267,000,000

Compiled from the following data found in the *Annual Report of the Board of Governors*, 1937, p. 48:

<i>Reserve Bank Credit and Related Items</i>	<i>June 30, 1936</i>	<i>June 30, 1937</i>
Bills discounted	\$ 4,000,000	\$ 10,000,000
Bills bought	3,000,000	4,000,000
United States government securities	2,430,000,000	2,526,000,000
Other Federal Reserve bank credit	35,000,000	22,000,000
Gold stock	10,608,000,000	12,318,000,000
Treasury currency outstanding	2,498,000,000	2,550,000,000
Currency in circulation	6,241,000,000	6,447,000,000
Treasury cash holdings	2,497,000,000	3,445,000,000
Treasury deposits with Federal Reserve banks	690,000,000	93,000,000
Nonmember deposits	262,000,000	285,000,000
Other Federal Reserve accounts	256,000,000	260,000,000
Member-bank reserve balances — total	5,633,000,000	6,900,000,000
Member-bank reserve balances — excess (estimated)	2,717,000,000	865,000,000

A comparison of Table 44 and Table 45 reveals that member banks, in the first year after the stock-market crash, adopted a policy of reducing their indebtedness to the Federal Reserve banks instead of lending more freely to local customers at lower rates of interest. The decrease in currency in circulation and an increase in monetary gold stock aided them in this policy. The moderate decrease in loans to brokers and to other customers on securities does not account for very much of the tremendous decline in total

TABLE 47. LOANS AND INVESTMENTS OF MEMBER BANKS

(June 30, 1936 to June 30, 1937)

Loans to customers — total		Increased	\$1,426,000,000
To brokers outside New York City	— \$ 8,000,000		
To others on securities	— 34,000,000		
Real estate loans	+ 166,000,000		
Banks' own acceptances	— 4,000,000		
Otherwise secured and unsecured	+ 1,308,000,000		
Open-market loans — total		Increased	\$ 282,000,000
Acceptances payable in United States	— \$ 13,000,000		
Bills payable abroad	— 3,000,000		
Commercial paper bought	+ 99,000,000		
Loans to brokers in New York City	+ 199,000,000		
Investments — total		Decreased	\$1,263,000,000
Direct obligations of United States Government	— \$ 851,000,000		
Fully guaranteed by United States government	— 131,000,000		
Other securities	— 280,000,000		
Total loans and investments		Increased	\$ 480,000,000
Loans to banks — total		Increased	\$ 34,000,000

Compiled from figures found in the *Annual Report of the Board of Governors*, 1937, p. 116.

<i>Loans and Investments of Member Banks</i>	<i>June 30, 1936</i>	<i>June 30, 1937</i>
Total loans and investments	\$32,259,000,000	\$32,739,000,000
Total loans	12,542,000,000	14,285,000,000
Total loans to customers	10,943,000,000	12,369,000,000
To brokers outside New York City	266,000,000	258,000,000
To others on securities	2,863,000,000	2,829,000,000
On farmlands	256,000,000	265,000,000
On other real estate	2,084,000,000	2,241,000,000
Reporting banks' own acceptances	117,000,000	113,000,000
Otherwise secured and unsecured	5,355,000,000	6,663,000,000
Loans to banks	81,000,000	115,000,000
Open-market loans — total	1,519,000,000	1,801,000,000
Acceptances payable in United States	144,000,000	131,000,000
Bills payable abroad	18,000,000	15,000,000
Commercial paper bought	278,000,000	377,000,000
Loans to brokers in New York City	1,079,000,000	1,278,000,000
Investments — total	19,717,000,000	18,454,000,000
Direct obligations of United States government	11,721,000,000	10,870,000,000
Fully guaranteed by United States government	1,950,000,000	1,819,000,000
Other securities	6,045,000,000	5,765,000,000

loans to customers. Most of this decline is accounted for by the decrease of \$2,006,000,000 in loans "otherwise secured and unsecured." Evidently the member banks were liquidating their so-

called commercial loans and placing the proceeds of that liquidation in open-market paper, especially in street loans, and in bonds, mostly long-term obligations of corporations.

Although money rates declined in 1930, there is no evidence in the data presented in Table 44 and Table 45 that Federal Reserve policy was effective in checking the decline in the commercial operations of American business. The evidence points rather to the policy, on the part of the member banks, of supporting security values at the expense of productive commercial transactions. Whether this policy was deliberate or not is hard to say, because individuals and business firms may have chosen to pay off their bank loans, thereby forcing banks to invest in bonds and open-market paper.

The most significant elements in the factors of increase and decrease in Federal Reserve bank credit and related items from June 30, 1936 to June 30, 1937, as shown by Table 46, are: (1) the tremendous gold imports, a part of which was sterilized, (2) the increase in currency in circulation, and (3) the vast increase in member-bank reserve balances, a large part of which was frozen by increases in reserve requirements.

The year from June 30, 1936 to June 30, 1937 represents a period of growth of loans to commerce and industry, reflecting in part the financing of larger inventories. This development, shown by the data presented in Table 47, was the first extensive movement of its kind since 1929, and is worthy of comment. The increase in loans to customers was accompanied by an increase in reserve balances and a negligible increase in bills discounted. Federal Reserve bank credit, therefore, does not account for the increase in loans to customers. Despite the increase in reserve requirements, which reduced excess reserves from \$2,717,000,000 to \$865,000,000, and despite sterilization of gold imports, member banks increased their loans to customers.

The Federal Reserve index of industrial production rose from 104 in June 1936 to 121 in December of that year, and then declined sharply during the last part of 1937. In this period of increased industrial activity, the member banks chose to support their increased volume of deposit liabilities with a smaller amount of government securities and a larger amount of loans to customers. This choice reflects a willingness on the part of the banks to shift from the lower

to the higher-yield assets whenever the business outlook is bright and the better borrowers are willing to enter into greater commitments for productive purposes. Some of the increase in loans to customers, however, was for consumption purposes, as is shown by the larger volume of personal loans and retail instalment paper handled by the commercial banks. These, too, were in large part a reflection of increased employment and improved business outlook.

The most significant items of Federal Reserve bank credit and related items in 1939, as shown by Table 48 were: (1) the great increase in gold stock, (2) a decrease in Treasury cash holdings reflecting government expenditures and Treasury deposits with Federal Reserve banks, (3) the increase in money in circulation, (4) an increase in Treasury currency outstanding, (5) an increase in member-bank and nonmember-bank reserve balances.

The chief factors during 1939 in member-bank credit and related items as shown, in part, by Tables 48 and 49 were: (1) a large increase in the total investment holdings of member banks which revealed the continuation of the trend toward the substitution of government obligations for other securities; (2) an increase in loans which reflected a considerable increase in the volume of business activity as compared with the previous year which was characterized by a decline in most of the indexes which measure business activity; (3) an increase in excess reserves despite the increase in loans and deposits; (4) an increase in deposits to the highest levels in banking in the United States.

Gold imports and United States Treasury operations had a very important part in the monetary and banking situation during 1939. The huge gold imports made possible simultaneous increases in (1) the total loans and investments of member banks, (2) deposits, (3) excess reserves, and (4) the amount of money in circulation. Most of the imported gold was, in the first instance, added to deposits and reserves of New York City banks and most of the increase in loans and investments occurred at these banks. By reason of Treasury operations, however, these funds were redistributed throughout the country, consequently the reserves and deposits of banks outside New York City also increased. The process by which this redistribution took place was the withdrawal by the Treasury of its New York balances and their expenditures in all regions.

Table 48 reveals the increase in Treasury currency outstanding, the decrease in Treasury cash holdings, and the decrease in Treasury deposits with the Federal Reserve banks. These items supplemented gold imports in making funds available to the money market during the year. The expenditures of the Treasury in 1939 exceeded its receipts by \$3,200,000,000, an excess which was financed in part by the reduction in its cash balances and in part by an increase in the government debt.

TABLE 48. FEDERAL RESERVE BANK CREDIT AND RELATED ITEMS

(Dec. 31, 1938 to Dec. 30, 1939)

Funds were made available to the money market through

1. An increase in bills discounted	\$ 3,000,000
2. An increase in other Federal Reserve bank credit	69,000,000
3. An increase in gold stock	3,132,000,000
4. An increase in Treasury currency outstanding	165,000,000
5. A decrease in Treasury cash holdings	297,000,000
6. A decrease in Treasury deposits with Federal Reserve banks	289,000,000
7. A decrease in other Federal Reserve accounts	9,000,000
Total	<u>\$3,965,000,000</u>

Funds were withdrawn from the money market through

1. A decrease in bills bought	\$ 1,000,000
2. A decrease in United States government securities	80,000,000
3. An increase in money in circulation	742,000,000
4. An increase in nonmember deposits	212,000,000
5. An increase in member-bank reserve balances	2,929,000,000
Total	<u>\$1,035,000,000</u>

Member-bank reserve balances increased

\$2,929,000,000

Compiled from data in the *Federal Reserve Bulletin*, March 1940, p. 213:

Reserve Bank Credit and Related Items.

	Dec. 31, 1938	Dec. 30, 1939
Bills discounted	\$ 4,000,000	\$ 7,000,000
Bills bought	1,000,000	0
United States government securities	2,564,000,000	2,484,000,000
Other Federal Reserve bank credit	33,000,000	102,000,000
Gold stock	14,512,000,000	17,644,000,000
Treasury currency outstanding	2,798,000,000	2,963,000,000
Money in circulation	6,856,000,000	7,598,000,000
Treasury cash holdings	2,706,000,000	2,409,000,000
Treasury deposits with Federal Reserve banks	923,000,000	634,000,000
Nonmember deposits	441,000,000	653,000,000
Other Federal Reserve accounts	260,000,000	251,000,000
Member-bank reserve balances	8,724,000,000	11,653,000,000
Excess reserves — member banks	3,205,000,000	5,209,000,000

TABLE 49. LOANS AND INVESTMENTS OF MEMBER BANKS
(December 31, 1939 to December 30, 1939)

<i>Loans</i>			
Commercial, industrial, and agricultural loans	Increased	\$	667,000,000
Open-market paper	Increased		13,000,000
Loans for purchasing or carrying securities	Decreased		258,000,000
To brokers and dealers	decreased	\$	183,000,000
To others	decreased		75,000,000
Real estate loans	Increased		241,000,000
Loans to banks	Decreased		69,000,000
Other loans	Increased		160,000,000
Total	Increased	\$	754,000,000
<i>Investments</i>			
United States government obligations	direct Increased	\$	301,000,000
Bills	increased	\$	277,000,000
Notes	decreased		1,166,000,000
Bonds	increased		1,190,000,000
United States government obligations guaranteed	Increased		804,000,000
Obligations of states and political subdivisions	Increased		244,000,000
Other securities	Decreased		233,000,000
Total	Increased	\$	1,115,000,000

Compiled from the following data which are found in the *Federal Reserve Bulletin*, June 1940, p. 560:

<i>Loans and Investments of Member Banks</i>	<i>Dec. 31, 1938</i>	<i>Dec. 30, 1939</i>
Total loans and investments	\$32,070,000,000	\$33,941,000,000
Commercial, industrial, and agricultural loans	5,448,000,000	6,115,000,000
Open-market paper	442,000,000	455,000,000
Loans for purchasing and carrying securities		
To brokers and dealers	973,000,000	790,000,000
To others	775,000,000	700,000,000
Real estate loans	2,716,000,000	2,957,000,000
Loans to banks	125,000,000	56,000,000
Other loans	2,728,000,000	2,888,000,000
United States government obligations		
Bills	286,000,000	563,000,000
Notes	3,389,000,000	2,223,000,000
Bonds	7,208,000,000	8,398,000,000
Guaranteed	2,340,000,000	3,144,000,000
Obligations of states and political subdivisions	2,448,000,000	2,692,000,000
Other securities	3,192,000,000	2,959,000,000

SUGGESTIONS FOR FURTHER READING

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CHAPTER XXVIII

THE TREASURY AND THE MONEY MARKET

The changing focus of control. — The management of the money and banking organization of a country is only part of a larger plan of social organization for the control of economic affairs and the attainment of other social objectives. In the development of the money and banking system, governments have delegated certain powers of control to agencies other than those which are given these powers by the popular vote of the country. Thus in matters of business control in the United States, the Federal Trade Commission, the Interstate Commerce Commission, and a large number of less well-known agencies have been established to provide a continuing control which Congress itself is unable to undertake. Just as our ideas of control in general have been subject to change, so have the ideas of control in money and banking been altered to conform to new problems and new theories for their solution.

It is the purpose of this chapter to indicate the manner in which the focus of control over banking and money affairs has been changed during the past century and the way that the control today is divided among the various agencies that have been created for the purpose of managing these affairs. The earliest banking in the United States was only slightly regulated by the laws of the times. In some respects, the state systems of banking which developed were sound; notable among these were the Suffolk and Louisiana systems. On the whole, however, the limits imposed by the laws of the period were poorly enforced and were therefore ineffective. It can be said that during the past one hundred years of American banking, the focus of control has been, in large part, in the individual banks themselves. Their policy in granting loans and their relation to the financial welfare of the communities in which they operated have been the essential factors in the control of the period. This same factor, control by the individual banks, characterizes the banking of today, for the individual banker still

decides which of the applications for loans shall be accepted and which shall not. The difference between the situation today and that of the nineteenth century is that these decisions constituted the major element in the control during the earlier period, while today these decisions are substantially affected by the policies of the numerous regulatory agencies.

A change in the complete autonomy of the individual bank occurred when the National Banking System was established in 1863, providing, among other things, for the limitation of the note issue. Since the present system of deposit currency had not yet developed, limitation of the power of the banks to issue notes was tantamount to a restriction of their power to make loans. This restriction did not affect the type of loans made, but it did place an upper limit upon the aggregate amount of loans which all the banks could make. But the provision of the Act of 1863 forbidding loans on real estate did alter the autonomy of the banks in determining the transactions they would finance.

The next development of control over banking was not as much a change in the regulation of loan and investment policies as it was a recognition of the need for closer attention to other variables. More specifically, three new variables became the subjects of supervision: the supply of funds in the money market, fluctuations in money rates of interest, and the gold reserve of the country. The Treasury of the United States tried with indifferent success for a number of years to serve as a central bank in controlling these conditions. Since it was poorly equipped for these tasks, they were assigned to the Federal Reserve System when it was established in 1913.

The literature of the period preceding the formation of the Federal Reserve System abounds in arguments concerning the concentration of control contemplated in the new act. It was feared by the public that the law would foster a concentrated money power so that the National Reserve Association originally proposed was defeated in favor of a system of regional banks diffusing the control over the entire country. For our present purpose, the establishment of the Federal Reserve System is important as an illustration of concentration of control in the hands of an independent agency. Thus the new law introduced a new era in banking and money control in the United States.

The autonomy of the regional banks was disturbed by the formation of the Open Market Committee in 1922. The purpose of this group, which was made up of representatives of the several banks, was the coordination of open-market purchases and sales, so that the actions of one bank would not be offset by a contrary action on the part of another. It had the effect of reducing the power of the individual Federal Reserve banks to determine policy. A somewhat similar change had developed during the World War when the Treasury interfered with the open-market policy of the Federal Reserve banks.

The decline in the power both of the individual member banks and of the regional Federal Reserve banks was further accelerated by the Banking Act of 1935. Greater powers were placed in the hands of the Board of Governors to determine the policies of the Federal Reserve banks. As matters stand at the present time, the control of the banking system is divided between several agencies: the individual member bank that determines loans, discounts, and investments; the Comptroller of the Currency who examines national bank members; the Board of Governors which decides upon credit policy; the Treasury which influences the money market, both through its fiscal policy and its power to alter the monetary unit; the Federal Deposit Insurance Corporation which guarantees a part of the deposits of the member banks; and, finally, the President who has the power to change the gold value of the money.

Definition of the Treasury. — In the present discussion, the Treasury will be treated as representing all those powers of control which are not exercised by the individual banks themselves or by the Board of Governors of the Federal Reserve System. This classification is made so as to include the Stabilization Fund, the Treasury's policy with respect to its cash and deposits, and the President's power to devalue the money.

The relation of the Treasury (thus defined) to the money market may be summarized as follows:

1. The Treasury sells and redeems its obligations in the market and is therefore interested in the state of the market both as this state relates to the rate of interest and the ability of the market to absorb securities of the Treasury.
2. The issuance and redemption of currency by the Treasury is a potentially disturbing force.

3. As here defined, the Treasury is responsible for establishing, maintaining, and changing the monetary unit.
4. Frequently the Treasury becomes interested in the state of the money market because of the effect foreign disturbances might exert upon domestic business.
5. The Treasury views the problem of money and banking control in a broad sense, that is, as a part of broad social control, and must therefore follow with interest the changes that develop.
6. The obligations of the Treasury afford an admirable medium for open-market operations by the central bank.

It is difficult to define precisely the power of the Treasury for at least two reasons. In the first place, the Treasury persuades the Board of Governors to adopt policies of advantage to the Treasury. In the second place, the Treasury in issuing, refunding, or retiring a part of the government debt creates money-market problems which the Board of Governors must take into account when formulating its policies. It is chiefly in periods of crisis rather than in periods of normal business that the Treasury exerts the greatest influence in the money market. That it should be possible for the Treasury to exercise such influence is questioned by some students. For example, Hardy says:

It is a generally accepted principle of modern central banking theory that central banks should be free from the control of the treasuries of the countries which they serve. It is the function of a central banking system to maintain a sound credit situation, and that objective is bound to conflict to a certain extent with the interest of the treasury in borrowing as cheaply, and at times as extensively, as it can. In this respect the situation of a treasury differs from other borrowers only in respect to power.

Compliance with the desire of national treasuries for cheap money having been the source of most of the disastrous inflations, the charters of the banks which have been founded during the stabilization era have as a rule contained elaborate provisions designed to maintain the independence of the banks from the government, and especially from treasury control. I believe this is a sound principle, but one which is certain in practice to be forgotten when war or other public emergencies make it necessary for treasuries to mobilize resources quickly.¹

¹ Hardy, C. O., *Credit Policies of the Federal Reserve System*, p. 278. Washington, D. C.: The Brookings Institution, 1932.

BANKING DEVELOPMENT AND THE TREASURY

The earliest interest of the Treasury in the state of the money and banking organization arose from its desire to possess a safe place for the deposit of its funds and a place from which to borrow in time of need. These functions were satisfactorily performed by the First Bank of the United States and the Second Bank of the United States. But the expiration of the charter of the Second Bank of the United States and the subsequent increase in the number of badly financed state banks caused such widespread losses that the Treasury was forced, in 1846, to establish the Independent Treasury System for the protection of its funds.

The Independent Treasury and the money market. — The technique of payments to the government under the Independent Treasury System caused the Treasury to become a major factor in the money market. On tax dates, funds were transferred to the Treasury from the individual banks, with a resulting strain on the reserves of these banks and a shortage of funds in the money market. The short-term rate of interest would soar to great heights for a short time and then return to normal levels as the funds were spent by the government and thus again became available to the individual banks. Frequently the Treasury seemed to carry on its operations with little or no concern for the possibility that such operations might have disturbing effects on the money market.

A similar indifference concerning the economic effects of its actions is witnessed in the redemption of government debt. From 1862 until 1913, the obligations of the government were the only legal collateral for bank note issues. When a Treasury surplus made it possible for the national debt to be reduced, the quantity of money in the market was correspondingly diminished.

Equal in importance, from the standpoint of the history of money market control, was the later practice of the Treasury of assuming the functions of a central bank during periods of monetary crisis. Burgess states:

It was in periods of financial crisis that the Treasury Department was frequently forced to assume the role of financial dictator. The Treasury came to the rescue of the money market by depositing funds in the banks buying government securities in the market, or anticipating interest payments on the debt in practically every one of the important financial crises. It was at times the

regular practice of the Treasury to put new money out in the fall when credit demands were greatest, and draw them in again in the early winter.²

This practice continued to flourish until, during the years from 1906 to 1912, it became a recognized part of the functions of the Treasury, the various secretaries of the Treasury reporting regularly on their activities in this respect. After the establishment of the Federal Reserve System, it was no longer necessary for this practice to be continued.

Treasury policy during the World War. — It is generally agreed by students of the money market that the decisive influence in the market during the World War was the Treasury and its demand for funds. Hardy's description of this period adequately summarizes the extent to which this influence was paramount to all other considerations:

Credit policy, like every other field of public administration, became an instrument of warfare. Not only was the pyramid of bank credit expanded to facilitate war finance, but discount rates were kept low, Liberty Bond paper was given preferential treatment at the Reserve Banks, and member banks were encouraged to load themselves with government obligations and with customers' paper secured by such obligations. Protests of Reserve Board members were met by intimations that unless Reserve authorities were willing to play the part assigned to them the Treasury would have to take over direct control of the Reserve system. Not until January 1920 was the Reserve Board formally free to shape its policies in accordance with commercial, agricultural, and industrial, rather than fiscal, necessities.³

The result of this emphasis on Treasury problems was an extensive inflation of credit which assisted the raising of prices to higher levels than had prevailed since the Civil War. It is debatable whether the World War could have been financed by other methods and whether the United States was comparatively better served by this policy than were certain of our allies in the choice of monetary methods for the support of fiscal policies.

Treasury policy from the World War to the depression. — From the time of the World War to the collapse of the stock market in 1929, the only important connection between the Treasury and the money market was in the retirement of the debt, which in the entire period amounted to almost \$10,000,000,000. In respect to this debt

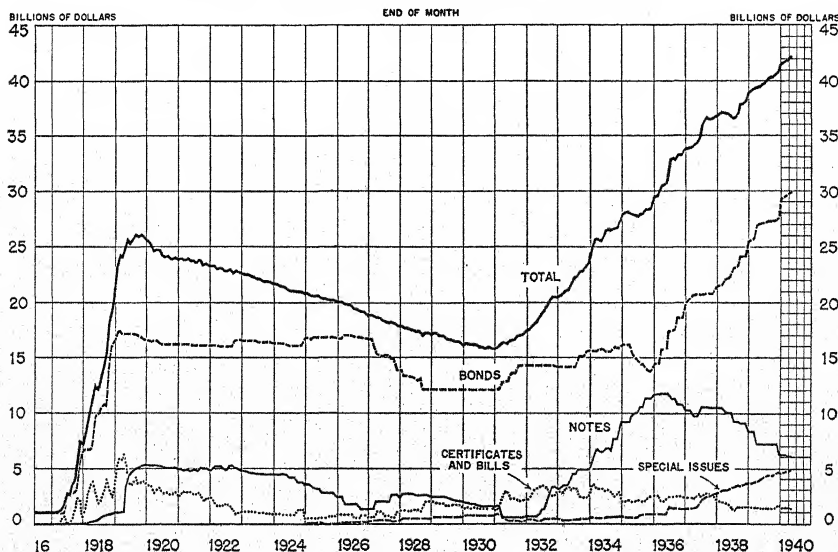
² Burgess, W. R., *The Reserve Banks and the Money Market* (Revised Edition), p. 114. New York: Harper & Brothers, 1936.

³ *Op. cit.*, p. 279.

retirement, the Treasury followed two policies, which are of interest here. First, as funds were accumulated in the sinking fund in anticipation of the maturity of certain bonds, they were used to purchase the bonds in the market, when the price was below par. This procedure saved the Treasury a small amount of money and, at the same time, provided support for the market. Second, of the same nature was the debt agreement between the United States Government and the British Treasury, whereby the British Treasury was permitted to pay its instalments on its war debt either in gold, dollars, or obligations of the United States. This plan also permitted the British Treasury to take advantage of the market prices on these bonds when they fell below par.

CHART 12

INTEREST-BEARING DEBT OF THE U. S. GOVERNMENT



Source: *Chart Book of the Board of Governors of the Federal Reserve System*, p. 20.

CONTROL OF THE MONEY MARKET TODAY

As was suggested earlier in this chapter, it is difficult to locate the exact focus of control in the market today, for there are pressures which can be exerted by the President or the Treasury upon the personnel of the Board of Governors in such a way as to secure

cooperation which would not be forthcoming if only economic considerations were followed. Despite the unmeasurable pressures, it should prove interesting, as a climax to the study of money markets, to determine the amount of control, in monetary terms, that could be exercised by each of these controlling agencies.

The powers of the Federal Reserve banks. — We may conveniently divide the powers of the Federal Reserve authorities into those which could be employed as restrictive measures during an overexpansion of the money supply, and those which would prove useful if the task were to stimulate business by further ease of the market.

The two chief instruments by which the Federal Reserve System could exercise a restrictive influence in the market would be by the sale of the bonds in its government bond portfolio and by raising member-bank reserve requirements. The volume of government securities held by the Federal Reserve banks on November 20, 1940, was \$2,231,300,000. The total of excess member-bank reserves in October, 1940, was \$6,864,000,000. The sale of the entire bond account in the open market would still leave a margin for expansion.

There is a possibility that the Board of Governors will ask for new powers of control over excess reserves. The excess reserves now available are computed with reserve requirements of 12, 17½, and 22¾ per cent for demand deposits and 5 per cent for time deposits. Under the existing law, the Board of Governors could increase these requirements to 14, 20, and 26 per cent for demand and 6 per cent for time deposits, depending upon the size of the city in which the bank operates. Only by very much higher reserve requirements could the Board of Governors bring excess reserves of the member banks down to manageable proportions.

If it were the purpose of the Board of Governors to foster an expansion, reserve requirements might be decreased and bonds purchased in the open market. The volume of bonds that could be purchased on present reserves can only be crudely estimated. On November 20, 1940, the reserve ratio of the Federal Reserve banks stood at 90.6. This means that for every dollar of note and deposit liabilities which the Reserve banks have outstanding, they have 90.6 cents of gold certificates and other lawful money. It will be recalled that these banks are required to hold reserves in gold or lawful money of 40 per cent against notes and 35 per cent

against deposits, so that the reserve ratio could decline to less than 40 per cent without violation of the law.

On the basis of the reserves held in the summer of 1940, the Reserve banks could add more than \$17,000,000,000 of bonds to their holdings without falling below the reserves required for the deposits that would be created by these purchases. Difficulties stand in the way of such operations, for example, the level of the bond market would soon reach a point where the Federal Reserve banks would probably be receiving a near zero yield on their bond account, and they would therefore be highly vulnerable to a change in the rate of interest.

The restrictive powers of the Treasury. — The power of the Treasury to exercise a restrictive influence on the money market arises from three general conditions: (1) the right to retire its note issue; (2) the movement of cash from special depository banks; and (3) the use of funds secured from the sale of bonds.

The Treasury note issue. — In May 1940, the Treasury note issues outstanding were: silver certificates, \$1,590,000,000; United States notes, \$241,000,000; and national bank notes, \$167,000,000. The amount of gold certificates and Treasury notes of 1890 in the hands of the public may be disregarded since the total amount is small. If the silver certificates, greenbacks, and national bank notes were retired, the Federal Reserve banks would be forced to issue a larger amount of Federal Reserve notes and would thereby diminish the power of the Federal Reserve system to exert an expansive effect on the market. Such a situation is unlikely since these particular notes constitute the total supply of the bills of smaller denomination. While such action is not imminent, it is a part of the power of the Treasury over the flow of funds in the money market. This power to retire note issues may be exercised only with congressional authorization, which action comes within the scope of the Treasury as here defined.

The movements of Treasury cash and deposits. — In the chapter on Instruments of Credit Policy, it was pointed out that the Treasury may control the reserves of the member banks by shifting its balances when these balances are large. In recent years, the Treasury has anticipated its need for funds and has maintained unusually large deposits both in the special depository banks as

well as in the Reserve banks. On March 26, 1940, these balances included \$725,000,000 in the depository banks and \$298,000,000 in the Federal Reserve banks. If the Treasury's policy were restrictive, the funds in the depository banks would be moved to the Reserve banks and the volume of member-bank excess reserves would be reduced correspondingly. The reverse effect would be secured if the movement were in the opposite direction.

The use of the proceeds of security flotations. — A further power of the Treasury to restrict bank reserves lies in the possibility, as long as the market for government bonds will allow it, either of selling bonds and taking the proceeds in cash, thus reducing the volume of circulating funds, or of requiring the Reserve banks to turn over an equivalent amount of gold certificates. This action would reduce the power of the Federal Reserve to expand credit. If the purpose were only to restrict member-bank loan expansion, the funds secured from bond sales could be used to build up the Federal Reserve deposits, causing the same results as are related above. Actually, the case of gold certificate redemption by the Treasury is simply a case of sterilization after the gold certificates have been issued rather than at the time the gold is imported.

The powers of the Treasury to expand credit. — If it were the purpose of the Treasury to expand the power to lend or to create further ease in the money market, any one of four courses, or some combination of them, could be followed:

1. \$3,000,000,000 in greenbacks could be issued.
2. The dollar could be further devaluated to represent 11.61 grains of pure gold.
3. Deposits could be transferred to the special depositories from the Federal Reserve banks, as has already been indicated.
4. The Exchange Stabilization Fund could be used for the issuance of gold certificates, thereby increasing the Treasury's deposit at the Federal Reserve. The spending of this deposit balance would diffuse the funds throughout the banking system.

The issuance of United States notes. — The power to issue \$3,000,000,000 in United States notes was given to the President by the Agricultural Adjustment Act of 1933, in which the power was stated as discretionary rather than mandatory. Up to the present time, it has not been considered necessary to resort to this expedient.

However, as long as the power is present in the law it will be possible for the money supply to be augmented by this method.

Further devaluation of the dollar. — The Treasury held on June 19, 1940, an amount of gold which it valued at \$19,769,000,000. Under the law, the President is empowered to raise the value of this gold to \$41.34 per ounce. In case this course of action were considered necessary, the gold now held would be increased to \$23,350,000,000, representing an increase of \$3,581,000,000. The devaluation of the dollar would raise proportionately the amount of gold certificates that could be issued. If gold certificates were issued to the Federal Reserve banks, the government deposit in them would be raised and the funds could then be used to support federal spending. If the resulting balances were spent, the Treasury account with the Federal Reserve would then decline and member-bank deposits would rise, though not by an equal amount, since under these circumstances the volume of the circulation would probably show some increase and the amount of required reserves would likewise increase.

The movement of Treasury cash and deposits. — From the end of June 1939 to June 19, 1940, the Treasury made funds available to the money market by (1) reducing its balances with the Federal Reserve banks, (2) decreasing Treasury cash holdings, and (3) increasing Treasury currency outstanding. These operations resulted in making available to the money market \$1,151,000,000 as follows:

	June 28, 1939	June 19, 1940
Treasury deposits with Federal Reserve banks	\$ 962,000,000	\$ 298,000,000
Treasury cash holdings	2,559,000,000	2,204,000,000
Treasury currency outstanding	2,879,000,000	3,011,000,000

In other periods, the Treasury has built up its cash holdings and its deposits with the Federal Reserve banks, while Treasury currency outstanding has either remained about stationary or has declined. The net effect of such operations is to withdraw funds from the money market and to reduce member-bank reserve balances. Thus the Treasury may accumulate idle balances at one period of time and expend them later, and in doing so may supplement or offset other factors of contraction or expansion.

The Sterilization Fund. — The Exchange Stabilization Fund came into existence in 1934 when \$2,000,000,000 was set aside from the profits derived from the devaluation of the dollar. Since that time,

this amount has been carried as the capital of the fund. The bulk of its assets consists of its claim, to the amount of \$1,800,000,000, against the gold held by the Treasurer of the United States. The balance sheet of the fund is reproduced as Table 50.

TABLE 50. BALANCE SHEET OF THE EXCHANGE STABILIZATION FUND

(As of June 30, 1939, and June 30, 1940)

	<i>June 30, 1939</i>		<i>June 30, 1940</i>	
<i>Assets</i>				
Cash:				
Treasurer of the U. S. Gold.....	\$1,800,000,000.00		\$1,800,000,000.00	
Treasurer of the U. S., Checking Account. . .	1,598,137.07		1,564,334.28	
Federal Reserve Bank of New York Special Account.....	104,567,674.90		127,198,969.35	
Disbursing Officers' Balances and Advance Accounts.....	3,185.31	\$1,906,168,997.28	11,072.26	\$1,928,774,375.89
Special accounts of Secretary of the Treasury in Federal Reserve Bank of N. Y.:				
Special Account No. 1 (Gold).....		84,635,422.59		86,020,180.63
Due from foreign banks (foreign exchange):				
France.....	81.49		17.88	
Belgas.....	2,220.34		505.06	
Sterling.....	42,225.04		2,83,640	
Central Bank of China (secured deposits).....	19,112,500.00	19,157,026.87	19,112,500.00	19,115,859.34
Investments — U. S. Government Obligations.....		5,026,562.50		10,448,723.13
Accrued Interest Receivable..		41,796.88		9,730.73
Other accounts (deferred charges)		15.00		6,013.43
Commodity sales contracts (deferred charges)		2,636.00		2,636.00
Total assets.....		<u>\$2,015,032,457.12</u>		<u>\$2,044,377,519.15</u>
<i>Liabilities and capital</i>				
Capital account.....		\$2,000,000,000.00		\$2,000,000,000.00
Accounts payable:				
Vouchers payable.....			4,018.05	
Due to foreign banks....			22,845,963.21	22,849,981.26
Earnings — less general expenses.....		15,032,457.12		21,527,537.89
Total liabilities and capital		<u>\$2,015,032,457.12</u>		<u>\$2,044,377,519.15</u>

Source: *Bulletin of the Treasury Department*, October 1940.

The Exchange Stabilization Fund possesses varying amounts of United States Treasury bonds and keeps a varying amount on deposit with the Federal Reserve Bank of New York. The opera-

tions of the Fund, therefore, affect the money market as does any other special fund of the federal government. The variations in the asset-accounts of the Exchange Stabilization Fund have been quite small. It is possible, however, that gold certificates might be issued against the gold held in the Fund. This currency when issued could find its way into bank reserves. Another possible use which might be made of this gold is the retirement of a part of the government debt. These and other possible uses of the Fund make it a factor worthy of consideration. In the event some such use is made of all or a part of the idle gold held by the Fund, its earnings, which amounted to approximately \$23,000,000 from January 31, 1934, to June 30, 1940, would decline, since some of its earnings were received as interest on investments.

Sterilization methods. — Sterilization of monetary reserves has taken a number of forms during the years since the World War. There have been three methods employed for this purpose in the United States, namely, the use of Treasury cash, the use of gold certificates, and the sterilization of gold. The general purpose of all these operations has been to reduce the amount of money at a time when it seems redundant and to release these supplies during periods when they will have a stimulating effect upon business conditions. The policy, while not decreasing the actual amount of money available at the time, does reduce the potential amount of expansion that can be achieved, and thus prevents member banks from using balances to foster credit expansion.

The use of Treasury cash as a sterilizing agent is illustrated in the following statement by Watkins:

In conjunction with its borrowing operations and its policy of maintaining large balances on deposit account, the Treasury can achieve partial sterilization of reserves by using Reserve banks as depositories. The adoption of this policy in December, 1935, resulted in a substantial increase of government deposits with the Reserve banks and a sharp decrease in government deposits with the commercial banks.⁴

Such a policy is clearly dependent upon the existence of large government demand deposits with the commercial banks; rather, the extent of the influence that can be exercised by this policy depends upon the size of these balances. The effect of the use of

⁴ Watkins, L. L., "The Variable Reserve Ratio," *Journal of Political Economy*, Vol. 44, 1936, p. 356.

the policy is the same as that which follows from the use of higher reserve requirements; a movement of the deposits from depositories to Federal Reserve banks causes a decline of member-bank balances with the Federal Reserve and an equal increase in government deposits. The only difference is that this action will affect only those banks which hold such deposits while the reserve changes affect all members of the system.

The second of these sterilization methods came into use after the World War when the United States was receiving large amounts of gold as a consequence of war — debt payments and a favorable balance of trade. At this time, the problem of the Federal Reserve authorities was to prevent the incoming gold supplies from having an undue effect upon the level of prices, and to this end, they resorted to the issuance of gold certificates. Harris reports this action as follows:

From the beginning of 1923 until the end of 1925, the reserve authorities and the Treasury continued to pump large amounts of gold into circulation. In 1926 the reserve authorities altered their policy and refrained from paying out gold certificates in greater amounts than were required to hold constant the volume in circulation. The Federal Advisory Council had proposed such a policy in 1925. Whether the Treasury and the reserve authorities clashed on gold policy at this time is not clear; at any rate, in the years 1925 and 1926, the Treasury supported a program for the retirement of national bank notes which resulted in a reduction by more than 100 millions of notes outstanding. . . .

In public statements it had generally been held that the object of putting gold into circulation was to create a secondary reserve, to retain confidence on the occasion of losses, and to reduce sentiment in favor of inflation. On the other hand, Governor Strong has made the point that it was desirable to maintain gold in circulation at the saturation point so that any losses would be at the expense of the reserves of the reserve bank.⁵

In this connection, it may be stated that the volume of gold certificates increased from \$173,000,000 on July 1, 1922, to \$1,074,000,000 on June 1, 1926. This increase was \$200,000,000 larger than the volume of gold imports during the period, so that the actual volume of gold reserves in the banks probably declined.

The third and most recent of the sterilization methods consists of a Treasury policy which is independent of the action of the Federal Reserve banks, but which may be undertaken in collaboration with

⁵ *Op. cit.*, pp. 356-357, *passim*. Reprinted by permission of the President and Fellows of Harvard College.

these authorities. The technique by which this process is carried out is as follows: A \$1,000,000 deposit in gold is sent to this country by a foreign bank in order to increase its balance here. The member bank which receives this sum cannot hold it in the form of gold under present laws and therefore turns it over to the Federal Reserve bank of its district, securing a deposit credit. But since Federal Reserve banks are not permitted to hold the gold, they will pass it on to the Treasury. The crucial step in this process comes in the manner in which the Treasury compensates the Federal Reserve bank for the gold.

In order better to visualize the procedures involved in the sterilization of gold imports, the balance sheets of the three institutions may be assumed to appear as follows during and after the transaction:

Member Bank				
<i>Date</i>		<i>Assets</i>		<i>Liabilities</i>
Dec. 1, 1940	Gold	\$1,000,000	Demand deposits	\$1,000,000
Dec. 2, 1940	Deposit with Federal Reserve	\$1,000,000		\$1,000,000
Dec. 3, 1940	Government Securities	\$1,000,000		\$1,000,000

Federal Reserve Bank				
<i>Date</i>		<i>Assets</i>		<i>Liabilities</i>
Dec. 2, 1940	Gold	\$1,000,000	Member-Bank Deposits	\$1,000,000
Dec. 3, 1940	Gold	\$ 0	Member-Bank Deposits	\$ 0

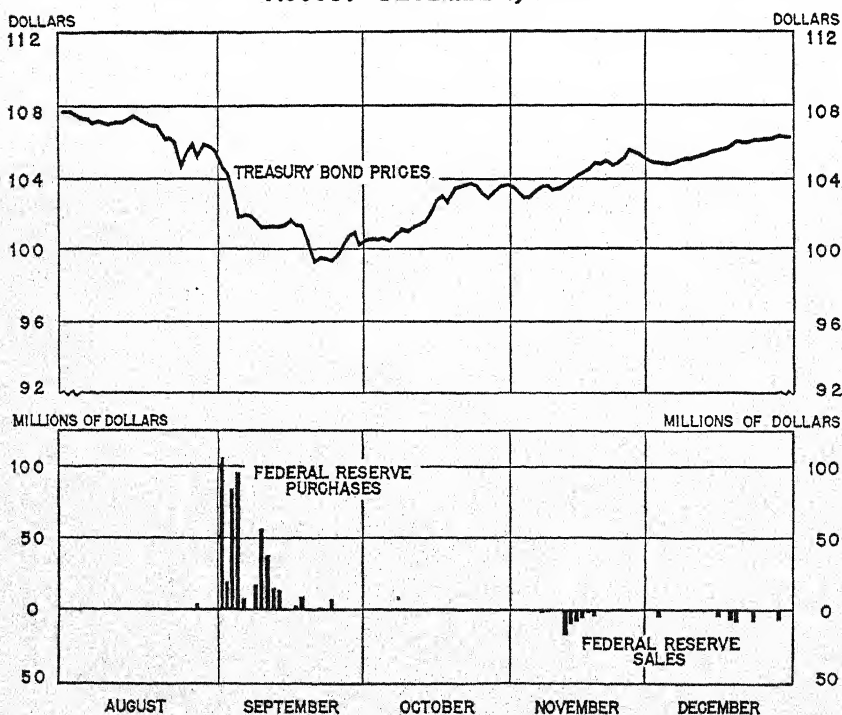
Treasury				
<i>Date</i>		<i>Assets</i>		<i>Liabilities</i>
Dec. 3, 1940	Gold	\$1,000,000	Securities outstanding	\$1,000,000

The explanation of these changes is as follows: On December 1, 1940, a member bank receives a gold deposit and incurs a deposit

liability of \$1,000,000. On the following day, it sends the gold to the Federal Reserve bank and receives an increase of its deposits of \$1,000,000, its liabilities remaining as before. On December 3, the Federal Reserve bank sends the gold to the Treasury, receiving a check on the Treasury's account with the member bank. This account has been established by the sale of securities to the member bank. Thus the net change is an increase in the member-bank deposits by \$1,000,000 and an increase in its investments by the same amount; similarly, the Treasury has increased its gold holdings by \$1,000,000 and its debt by \$1,000,000.

CHART 13

OPEN-MARKET OPERATIONS AND TREASURY BOND PRICES AUGUST–DECEMBER, 1939



Source: *Annual Report of the Board of Governors of the Federal Reserve System, 1939*, p. 7.

If it does not appear desirable for the incoming gold to be sterilized, the Treasury may compensate the Federal Reserve bank by issuing gold certificates to it in the same amount as the gold

received. Since gold certificates are now the legal reserves for the Federal Reserve banks, the expansion of credit is not impaired under this procedure and credit can expand as demanded by business.

The policy of gold sterilization, unlike the two preceding methods, is expensive for the Treasury. The borrowing of funds to be used in paying for gold means that the Treasury pays interest on funds acquired for this purpose. At a later date when the policy is reversed and gold certificates are issued to the Federal Reserve bank, the Treasury uses the funds previously borrowed, but during the interval in which the funds are sterilized, the loss is equal to the cost of interest.

Cooperation between Treasury and Federal Reserve. — The need for the closest possible cooperation between the Federal Reserve banks and the Treasury is apparent from the foregoing discussion. The power of the Treasury to supply funds to and withdraw funds from the money market, necessitates coordination between Federal Reserve discount policy, open-market operations, etc., and the movements of Treasury cash, currency, and deposits. The use of other instruments of control, such as the power placed in the Board of Governors to determine margin requirements for the purchasing and holding of securities, must also be coordinated with Treasury operations. Furthermore, the policies of the Treasury with respect to taxation profoundly affect both the demand for and the supply of loanable funds. The difficult task of coordinating tax policy and control of money and credit may be as important to national well-being as consistency of control by the Federal Reserve System and Treasury over bank credit and money rates.

There is implied in this survey of the power of the Treasury over the money market a potential conflict between the policies of the Board of Governors of the Federal Reserve System and the Treasury. Such a conflict might arise in the event the Board of Governors should desire to adopt measures in order to place restraints upon a tendency toward inordinate speculation in securities and commodities, and in other fields. One of the restrictive measures the Board of Governors might wish to adopt would be the sale of government securities in the open market. This action would adversely affect the market for those securities and run counter to the efforts of the Treasury to support that market. The member

banks, however, possess such huge holdings of government securities that the Board of Governors might consider itself obligated to cooperate with the Treasury in its effort to maintain orderly conditions in the bond market.

In August and September 1939, the Board of Governors made the choice of cooperating with the Treasury in supporting the market for government securities through open-market purchases, rather than the choice of placing restrictions upon an incipient war boom. Chart 13 reveals the action of the market for Treasury bonds, August to December 1939, in the face of Federal Reserve purchases during the same months.

Fortunately the upturn in business activity during this period did not degenerate into a speculative boom. Had such a development taken place, the pressure on the bond market would have been more severe and the action of the Open Market Committee necessarily would have been more extensive. The Board of Governors could have used its other powers to restrict speculative tendencies, if necessary. However, the use of such powers as the determination of margins on stock-market commitments was deemed to be unnecessary. Despite the fact that the threatened war boom did not reach dangerous proportions, the aggregate amount of securities purchased by the Federal Reserve banks from August 28, 1939, when purchases began to September 25, when they terminated, was \$473,000,000.

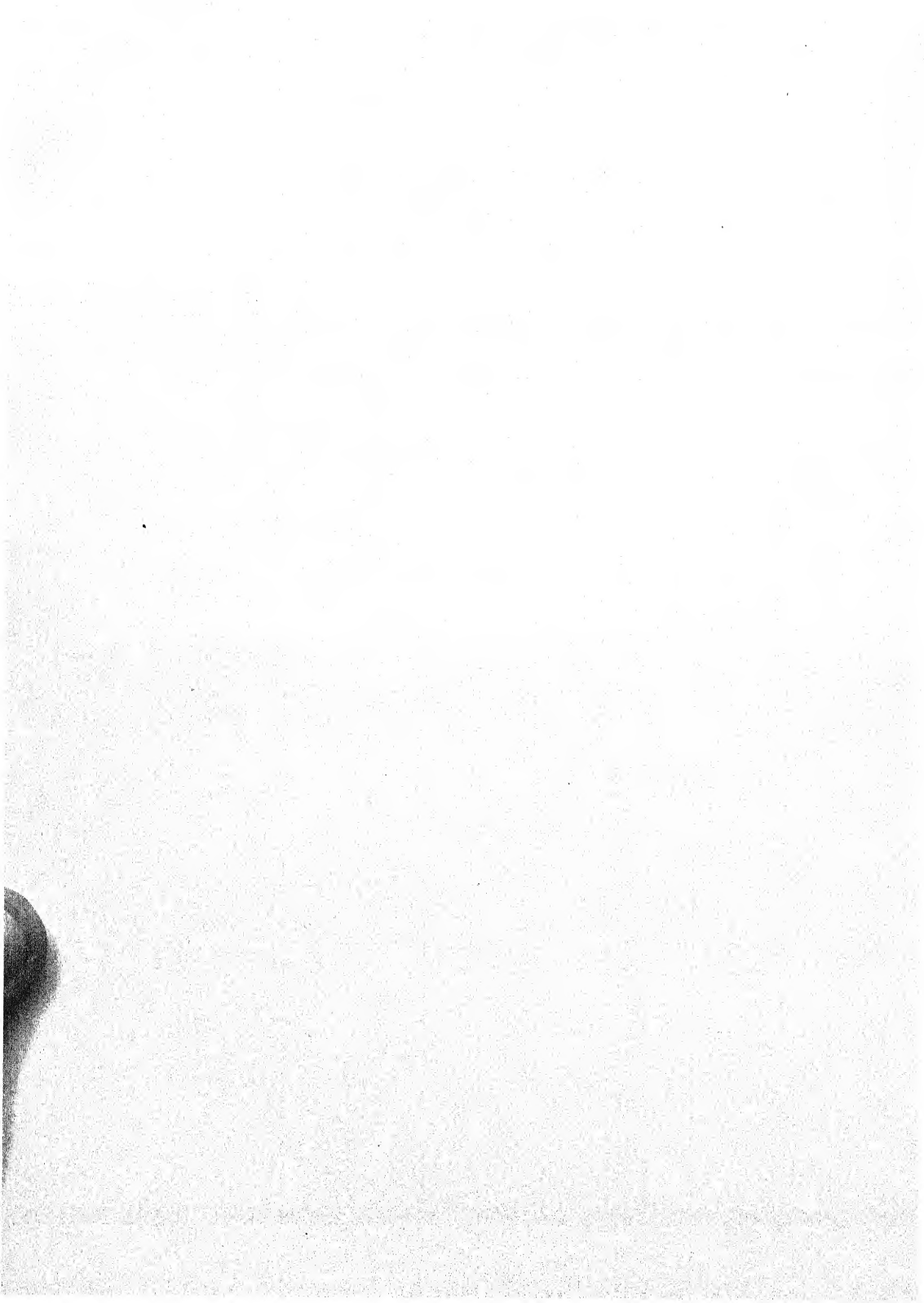
While these purchases were taking place, a number of precautions were taken to prevent, so far as possible, the development of disorderly conditions in the market for government securities. It was announced that the Federal Reserve banks stood ready to make advances to both member and nonmember banks on government securities at par and at the discount rate (1 per cent in New York and $1\frac{1}{2}$ per cent at other Federal Reserve banks; later 1 per cent at six Federal Reserve banks). For a time, dealers were requested to give the names of sellers of securities as a means of detecting possible speculative short sales, and hours of trading in Government securities were restricted.

No serious conflict between Treasury and Federal Reserve policy has occurred in recent years, chiefly because it is in the interest of both to prevent the development of disorderly conditions in the market for government securities. The test will come whenever

the prices of government securities decline in the face of speculative excesses which Federal Reserve authorities feel impelled to stop. Present indications are that Treasury policy is most likely to dominate. The Federal Reserve banks, however, are not likely to be helpless witnesses of the result, since they may be able to protect the market for government securities and prevent speculative excesses in other markets at the same time, through a marshalling of all their instruments of control.

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PART SEVEN

MONEY AND CREDIT IN OUR WORLD ECONOMY



CHAPTER XXIX

FOREIGN EXCHANGE MECHANISMS

Introduction. — The financing of international trade is, to a certain extent, similar to that of domestic trade. When a manufacturer sells merchandise to a customer in his own country, the question of payment is simple; the manufacturer receives money of his own country for his goods. But when sales are made to customers residing in foreign countries, complications arise. If an American exporter, for example, sells commodities to an English importer and receives payment in pound sterling, it will be necessary for him to convert the British pounds into American dollars. On the other hand, if goods exported to England are billed in terms of American dollars, the English importer will be forced to convert his pounds into dollars to effect payment. Thus prior to the execution of any business transaction involving the conversion of values from one monetary unit into those of another, the price of goods in the first country must be translated into the price expressed in the money of the second country, which represents the second party to the exchange. This translation is effected by referring to the rates of exchange current at the time of the transaction.

Foreign exchange rates are the prices quoted for foreign monies in which payments are either received from or made to foreigners. For example, the current rate of exchange in New York on London is the price in American dollars at which the right to demand one British pound in London can be purchased. This rate is in reality one aspect of the value of money which was treated in a previous discussion of this subject.¹ In that discussion, the value of money was expressed in terms of the *internal* purchasing power of money. Foreign exchange rates measure the *external* purchasing power of money.

The market for foreign exchange. — Every business transaction reaching across national boundaries augments either the demand for or the supply of foreign exchange or, less frequently, of

¹ See pages 491 to 500.

foreign currency. No importer can conveniently and effectively buy British pounds needed to make payments for English merchandise and no exporter can convert the proceeds of his sales abroad in terms of foreign monetary units, unless there exists an organized market in which purchases and sales of foreign exchange can be made with the degree of certainty necessary to assure delivery of or payments for funds.

The foreign exchange market, like any other competitive market, consists of buyers and sellers. The buyers have payments to make in terms of foreign monetary units; the sellers have in their possession claims to money in the foreign countries, which claims are offered for sale. These buyers and sellers are brought together through market institutions, and thus is determined the price of a particular foreign monetary unit, this price being the amount of dollars and cents which must be given to obtain a unit of a desired foreign currency. It should be recalled in this connection that the modern concept of a market is not so much a market place as an area within which the forces of demand and supply may assert themselves in the determination of prices.

The demand for exchange.—Prior to a discussion of rates of exchange, it may be advisable to describe briefly the sources from which this demand and supply arise. A demand for foreign money occurs whenever American residents have to meet payments abroad in terms of foreign currencies. It may arise from a number of transactions such as:

1. The importation of merchandise.
2. The purchase of foreign banking, insurance, freight, and other services.
3. Payment of interest and dividends and repayment of long-term debts by American borrowers to foreigners.
4. Repayments by American financial institutions of short-term loans.
5. Short-term loans extended by Americans to foreigners.
6. The purchase by Americans of securities held abroad.
7. Expenditures in foreign countries by American tourists, the United States Government, and charitable and educational institutions.
8. Immigrants and others sending money abroad to relatives or friends.

The supply of exchange. — All payments in terms of foreign currencies due Americans constitute the supply of foreign exchange. The following are some of the chief sources of the supply of claims against foreigners:

1. The exportation of American goods.
2. The sale of American banking, insurance, freight, and other services to foreign purchasers.
3. The remittance of interest and dividends by foreigners on securities owned in the United States and the repayment of long-term debts to Americans.
4. The placing of short-term funds in the American money market by foreign lenders.
5. The recall of American-owned short-term loans from foreign money markets.
6. The sale of American securities abroad.
7. The expenditures of foreign tourists, governments, and other agencies in the United States.
8. The sending of remittances by foreigners to friends or relatives in the United States.

Bankers, as far as possible, try to balance international payments by means of bills of exchange. These bills of exchange may be in the form of demand or time, clean or documentary bills. Most frequently, foreign trade involves the use of bankers' acceptances rather than trade acceptances, which are employed primarily in domestic trade.²

Should the transactions resulting in claims on foreigners equal those resulting in payments to foreigners, the accounts of all the institutions participating in these transactions would be in balance. Since, however, under ordinary conditions the trade of no two countries balances over a given period, the employment of bills of exchange enables bankers to draw third countries into this balancing process. Thus, bankers act as international clearing houses, canceling debits against credits in order to curtail the shipment of specie from country to country. This function is important, not only because unnecessary expenses are avoided, but also because gains or losses of specie affect national monetary structures.

² It will be recalled that the use of the banker's acceptance involves the obtaining by the importer of a letter of credit and the possible employment by the accepting financial institution of a trust receipt.

Until the very recent past, a triangular trade existed between Europe, the United States, and Latin America. The United States bought more from Latin America than was sold to her; Latin America purchased more from Europe than was sold to Europe; and European countries bought more from us than we bought from them. The accumulating surplus credits due us from Europe were used to meet the payments due to Latin American Nations who came into the possession of funds to meet their obligations to Europe. It is apparent, therefore, that it is the function of foreign exchange to bring into equilibrium, as nearly as possible, the supply of and the demand for bills of exchange.

Considered from the individual banker's point of view, his supply of foreign exchange at a particular time consists of the deposits that he has to his credit in foreign financial institutions. Every draft sold against his accounts abroad will decrease his supply of foreign exchange so that new deposits must be made continuously unless it is desired to cease selling foreign drafts.

There are a number of ways by which an American bank may replenish its deposits abroad:

1. Under an international gold standard, gold may be shipped abroad which will be accepted upon arrival by weight and credited in terms of a corresponding amount of foreign currency, depending upon the currency's legal gold content.
2. Demand or time bills may be purchased from Americans who have received them in payment for exports. These instruments are mailed abroad to be credited to the account of an American bank.
3. Funds on deposit at one money center may be transferred, usually by cable or telegraph, to any other center where needed, after conversion into that particular monetary unit.

The balance of international payments. — The compilation of all the commercial and financial transactions made within a definite period of time, by all the people residing in a country, forms that country's international balance of payments. Table 51 shows the balance of international payments of the United States for 1938 and reveals how American sales of goods and services give rise to equivalent cash claims by the United States against foreign countries and how American purchases give rise to corresponding cash claims which foreign countries hold against this country.

TABLE 51. UNITED STATES BALANCE OF INTERNATIONAL PAYMENTS FOR 1938

(In millions of dollars)

Item	1938		
	<i>Receipts from foreigners for exports (credits)</i>	<i>Payments to foreigners for imports (debits)</i>	<i>Net credits (+) or debits (-)</i>
Trade and service items:			
Merchandise, including adjustments....	\$3,180	\$2,000	+\$1,180
Freight and shipping.....	113	155	- 42
Tourist expenditures.....	159	516	- 357
Immigrant remittances.....	35	150	- 115
Charitable, educational, and other contributions.....	.....	40	- 40
Interest and dividends including war-debt receipts.....	550	216	+ 334
Government transactions.....	33	98	- 65
Miscellaneous services.....	191	60	+ 131
Total trade and service items	\$4,261	\$3,235	+\$1,026
Gold and silver:			
Gold exports and imports.....	\$ 6	\$1,979	-\$1,973
Gold earmarking operations (net).....	.....	.....	+ 333
Gold movements (net).....	.....	.....	- 1,640
Silver exports and imports.....	7	231	- 224
Total gold and silver movements (net)	\$.....	\$.....	-\$1,864
Capital items:			
Long-term capital movements.....	\$1,724	\$1,701	+\$ 23
Movement of short-term banking funds (net).....	.....	.....	+ 292
Paper currency movements (net).....	.....	.....	+ 15
Total capital items (net).....	\$.....	\$.....	+\$ 330
Other transactions and residual.....	\$.....	\$.....	+\$ 508

Source: United States Department of Commerce, Bureau of Foreign and Domestic Commerce Bulletin, *The Balance of International Payments of the United States in 1938*.

Rates for bills. — The daily foreign exchange statement found in *The New York Times* of March 23, 1940, reads:

Sterling — Par \$8.2397 per pound

Demand.....	\$3.71 $\frac{1}{8}$
Cables.....	\$3.71 $\frac{1}{8}$
Commercial bills, 60 days.....	\$3.69
Commercial bills, 90 days.....	\$3.68 $\frac{1}{2}$

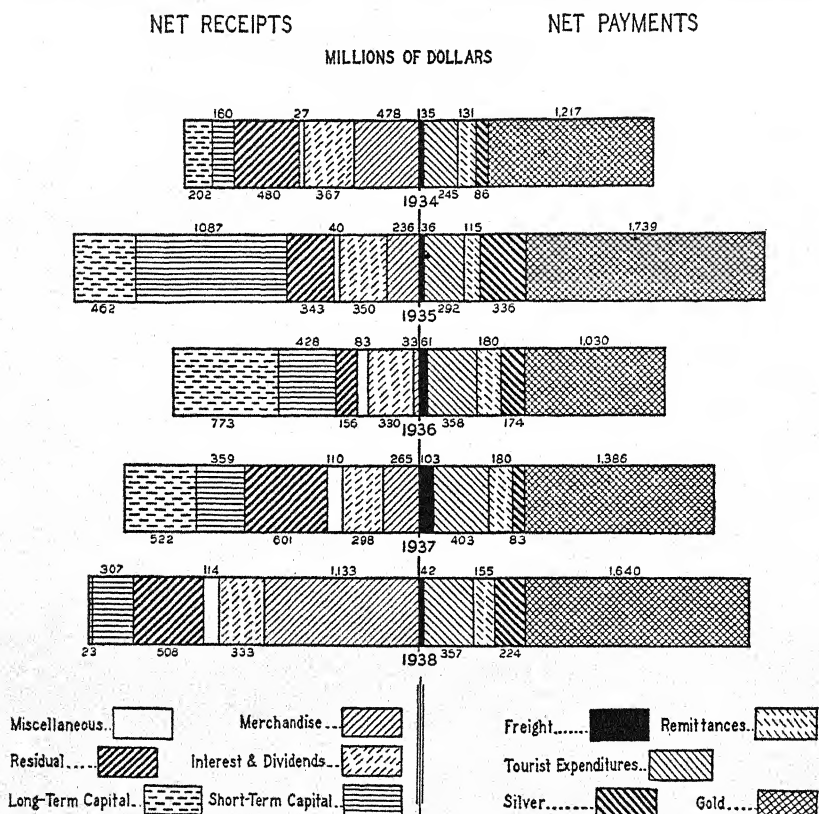


FIG. 31. BALANCE OF INTERNATIONAL PAYMENTS OF THE UNITED STATES, 1934-1938

Source: United States Department of Commerce, Bureau of Foreign and Domestic Commerce Bulletin. *The Balance of International Payments of the United States in 1938*.

Here there are variations from $\$3.68\frac{1}{2}$ to $\$3.71\frac{1}{8}$, a difference of almost 3 cents to the pound sterling. These differences are partly explained by the time element involved and partly by the discount rate in existence at the time. The cable rate today forms the basis of all exchange dealings between banks and their customers. It is the rate at which the market deals in telegraphic transfers. Foreign currency bought in this manner is available in one day after purchase in England, and in two days after purchase in other countries. If cable exchange is sold, the selling bank's foreign balances are almost immediately debited, ordinarily causing a loss

of interest for which the banker tries to find compensation in a slightly higher rate for cables than demand sterling, at present approximately $\frac{1}{16}$ cent. Anyone engaging in a foreign exchange transaction with his bank will find that the above-mentioned rates are nominal and that the rate quoted to him by his banker will differ from this current rate, the margin being always against him. It is out of this margin that the bank recoups the expense entailed by the business and from which it derives its profit.

Demand drafts are payable upon presentation. As it takes the mail about five days to go from New York to London, a banker selling a demand draft (check) knows that his account will not be debited for this number of days and that he will continue, after the sale of the draft has been made, to receive interest on his foreign balance for the "mail time period." For this reason, demand drafts sell for less than cables. In view of the short time required for transit to some foreign countries and the present low interest rates, cable and demand rates are, at times, identical except that the buyer must pay the charge for the cable. No telegraphic rates are as a rule quoted in New York on Mexico or on Montreal since the time of transit on demand exchange is exceedingly short.

The so-called long rate of exchange is the price of a bill payable a certain length of time, sixty or ninety days, after the day of purchase. Demand drafts are termed short bills. As stated on March 23, 1940, 60-day commercial sterling bills were purchased in New York at $2\frac{1}{8}$ cents a pound less than demand bills; 90-day sterling bills brought an additional $\frac{1}{2}$ cent per pound less than demand bills. Generally speaking, the longer the maturity of the bill, the lower is the exchange rate in comparison to the cable and demand rates. If a banker should give \$100,000 on March 23 for a 90-day draft, he would have to wait until June 23 to collect from the acceptor, and if money is worth 2 per cent per annum, he would be entitled to receive on the due date the equivalent of \$100,500. Since bills are usually discounted, the rate of exchange on a 90-day bill will be lower than the cable rate by the amount of the prevailing discount rate for 90-day funds.

In some foreign countries, a bill-stamp must be purchased and affixed to the bill. On a time draft, this charge is at least one-half per mille of the amount of the bill so that this additional cost must be taken into consideration by the bank dealing in bills. Finally,

there is the question of credit. A bill is only a promise to pay, the value of which rests upon the joint security of the drawer and acceptor. There is naturally but little risk in connection with a banker's bill. But, under present conditions, contingencies may develop to delay payment. The risk may amount to little, but it is there nevertheless and the banker will not shoulder any risk without adequate compensation. The long rate of exchange, then, may be defined as: cable rate plus interest at the foreign discount rate during the credit term of the bill plus foreign bill-stamp plus some allowance for the risk assumed.

The allowance for interest on a time bill is based on the foreign bank rate in the case of commercial paper (more frequently used in Europe and Latin America than in the United States). In the case of a banker's acceptance it is based on the discount rate prevailing in the money market in whose currency the instrument is drawn. Since a high rate of interest decreases the present value of bills and a low rate of interest increases it, discount rates in foreign money markets must be watched very closely by all foreign exchange dealers. From this it might appear as if the New York banker buying bills for discount in London would stand to lose or gain should the rate in the London market change between the purchase and arrival dates of a bill. To avoid such a speculative element, the London bankers mail their American correspondents *daily* an *arrival rate of discount*. This is the rate at which English institutions obligate themselves to discount bills bought by their New York correspondents on a specific date, regardless of the rate which might be in existence in the London money market at the time of the bill's arrival. Thus, a New York banker is in a position to calculate the exact rate of discount in London for a bill he wishes to purchase, without engaging in a more or less speculative venture.

Par of exchange. — Upon close examination of the foreign exchange statement published daily in *The New York Times*,³ one may observe that after the name of the countries enumerated there follows a reference to the par in terms of the dollar. For example, sterling, for Australia, New Zealand, and South Africa, is given at par \$8.2397 per pound; for Japan, as par 84.3957 cents per yen. With reference to Mexico, "parity is not yet determined."

³ See Figure 32.

FOREIGN EXCHANGE

Saturday, March 23, 1940

Range of Rates, Sight Exchange

	High.	Low.	Final.	Fri- day's Final.
LONDON ...	\$3.72½	\$3.70½	\$3.71½	\$3.72½
PARIS	2.11½	2.10½	2.10½	2.11½
ROME	5.05	5.05	5.05	5.05
AMST'RD'M.	53.10½	53.09½	53.10	53.10
BRUSSELS...	17.03½	17.02½	17.03	17.03½
SWEDEN ...	23.83½	23.83½	23.83½	23.83½
CANADA ...	81.31	81.18	81.18	81.31

Ninety-Day Rates (Points)

LONDON—2½c disc., prev. day 2½c disc.
PARIS—4 disc., prev. day 4 disc.
AMSTERDAM—35 disc., prev. day 35 disc.
SWITZERLAND—12 disc., prev. day 12 disc.
BRUSSELS—25 disc., prev. day 25 disc.

Closing Rates

Quotation on sterling represents dollars and decimals of a dollar; all others represent cents and decimals of a cent.

Parity of the exchanges in the following tabulation is based on the new gold value of the United States dollar as established by Presidential proclamation on Jan. 31, 1934.

Europe

	Satur- day.	Fri- day.	Week Ago.	Year. Ago.
STERLING—Par \$8.2397 per pound.				
Demand ...	\$3.71½	\$3.72½	\$3.73½	\$4.68¼
Cables	3.71½	3.72½	3.73½	4.68¼
Com., 60 d	3.69	3.70½	3.71½	4.67½
Com., 90 d	3.68½	3.70	3.71½	4.66¾

STERLING—In French francs (London).
176¼@176½ 176¼@176½ 176¼@176½ 176¼

AUSTRALIA—Par \$8.2397 per pound.
Demand ... \$2.96½ \$2.98¼ \$2.99¼ \$3.74¼
Cables 2.96½ 2.98¼ 2.99¼ 3.74¼

NEW ZEALAND—Par \$8.2397 per pound.
Demand ... 2.99½ 3.00¼ 3.01½ 3.77½
Cables 2.99½ 3.00¼ 3.01½ 3.77½

SOUTH AFRICA—Par \$8.2397 per pound.
Demand ... 3.70½ 3.71½ 3.72½ 4.67½
Cables ... 3.70½ 3.71½ 3.72½ 4.67½

FRANCE—Parity of franc approximately 2.653 cents; as of Nov. 12, 1938.
Demand ... 2.10¼ 2.11¼ 2.11½ 2.64½
Cables 2.10¼ 2.11¼ 2.11½ 2.64½

ITALY—Par 5.2631 cents per lira.
Demand ... 5.05 5.05 5.05 5.26¼
Cables 5.05 5.05 5.05 5.26¼

BELGIUM—Par 16.95 cents per belga.
Demand ... 17.03 17.03½ 16.99½ 16.82¼
Cables ... 17.03 17.03½ 16.99½ 16.82¼

DENMARK—Par 45.3740 cents per krone.
Demand ... 19.32 19.32 19.33 20.90
Cables ... 19.32 19.32 19.33 20.90

FINLAND—Par 4.2642 cents per finmark.
Demand ... 1.80 1.80 1.75 2.06¼
Cables ... 1.80 1.80 1.75 2.06¼

	Satur- day.	Fri- day.	Week Ago.	Year. Ago.
GREECE—Par 2.1973 cents per drachma.				
Demand ..	.70½	.70½	.71	.86
Cables ....	.70½	.70½	.71	.86
HOLLAND—Parity changed Sept. 28, 1936; new value not yet determined.				
Demand ..	53.10	53.10	53.11½	53.09
Cables	53.10	53.10	53.11½	53.09
HUNGARY—Par 29.6125 cents per pengo.				
Free inland.	17.70	17.70	17.70	19.75
NORWAY—Par 45.3740 cents per krone.				
Demand ..	22.73	22.73	22.73	23.53
Cables	22.73	22.73	22.73	23.53
PORTUGAL—Par 7.4831 cents per escudo.				
Demand ..	3.50	3.52	3.50	4.27
Cables	3.52	3.54	3.52	4.28
RUMANIA—Par 1.0127 cents per leu.				
Demand ...	.53	.53	.55	.75
Cables ....	.53	.53	.55	.75
SWEDEN—Par 45.3740 cents per krona.				
Demand ..	23.83¼	23.83¼	23.84	24.13½
Cables	23.83¼	23.83¼	23.84	24.13½
SWITZERLAND—Parity changed Sept. 28, 1936; new value not yet determined.				
Demand ..	22.42½	22.43	22.42½	22.49½
Cables	22.42½	22.43	22.42½	22.49½
YUGOSLAVIA—Par 2.9820 cents per dinar.				
Demand ..	2.34	2.35	2.34	2.31
Cables	2.34	2.35	2.34	2.31

Canada

MONTREAL—Par \$1.693125 per Canadian dollar.
Demand ... 81.18 81.31 81.87 99.50

Mexico

MEXICO CITY—Parity not yet determined.
Demand ... *16.90 *16.90 *16.90 *20.20

Far East

CHINA—Cents per silver dollar for Hong Kong and Shanghai.

Hong Kong—
Demand ... 23.11 23.11 23.13 29.05
Cables 23.16 23.16 23.18 29.10

Shanghai—
Demand ... 6.43 6.48 6.43 16.20
Cables 6.50 6.55 6.50 16.25

INDIA—Calcutta: 61.7973 cents per rupee.
Demand ... 30.25 30.25 30.19 35.01
Cables ... 30.30 30.30 30.24 35.06

PHILIPPINE ISLANDS—Manila: Par 50 cents per silver peso.
Cables ... 49.77 49.77 49.87 49.80

JAVA—Par 63.06 cents per florin.
Cables ... 53.68 53.68 53.75 53.25

JAPAN—Par 84.3957 cents per yen.
Demand ... 23.43 23.43 23.44 27.27
Cables ... 23.48 23.48 23.49 27.32

STRAITS SETTLEMENTS—Par 96.13 cents per dollar.
Cables ... 43.84 43.83 43.87 54.45

South America

ARGENTINA—Par 71.8724 cents per Argentine paper peso.
Cables ... 23.65 23.65 23.60 23.10

BRAZIL—Par 6.06 cents per paper milreis.
Cables (free) 5.15 5.15 5.15 5.90

CHILE—Par 20.5960 cents per gold peso.
Cables (of'l) 5.16 5.16 5.16 5.19

COLOMBIA—Par 57.14 cents per gold peso.
Cables (of'l) 58.00 58.00 58.00 58.00

PERU—Par 47.40 cents per sol.
Cables ... 18.00 18.00 18.25 20.25

URUGUAY—Par 65.83 cents per peso.
Inland ... 40.00 40.00 40.00 37.50

VENEZUELA—Par 32.67 cents per bolivar.
Cables ... 30.25 30.25 30.75 31.75

*Selling rate.

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FIG. 32. DAILY FOREIGN EXCHANGE STATEMENT

Par of exchange of currencies on a gold basis is computed by comparing their respective gold contents. Under the presidential proclamation of January 31, 1934, the American dollar was defined as 13.7143 grains of fine gold. In England, despite a *de facto* devaluation, the legal definition of the standard gold coin is still 113.0016 grains of fine gold. Thus the amount of gold in the pound is $113.0016 : 13.7143 = 8.2397$ times the gold content of the dollar. In our discussion of the determination of foreign exchange rates, the former significance of the par of exchange will be apparent.

Forward exchange. — Dealing in forward exchange developed after the World War and was devised primarily to safeguard traders against losses which might result from wide postwar exchange fluctuations. The nature of such a risk can easily be seen from the following example:

An Italian manufacturer decides to equip his plant with American machinery. An American firm quotes him a price of \$100,000; the machinery to be delivered three months from today and payment to be made on delivery. The current rate of exchange between Rome and New York being approximately 5 cents per lira, the cost to the Italian customer is approximately 2,000,000 liras. Upon acceptance of the offer, he feels that this price is a limit beyond which he cannot possibly go. As payment is not to be made for three months, he incurs a risk, say, of a fall of the lira to 4 cents, in which event he will be forced to pay not 2,000,000 liras, but 2,500,000 liras. Of course, the lira may rise, but the Italian is a manufacturer, not a gambler on the foreign-exchange market; therefore, he does not take the rise into account.

One possible solution would be for the manufacturer to open an account for \$100,000 today in a New York bank or to buy a three months' bill of \$100,000. This would eliminate the risk of a loss caused by a fall in the lira, but it would also mean "cash with the order." Such a transaction would be tantamount to a withdrawal of 2,000,000 liras from his working capital for three months. Such steps are practically impossible for any businessman to take.

In order to eliminate such difficulties, bankers today buy and sell futures. The Italian manufacturer would ask his banker for a quotation on dollars for delivery three months from today, or, as is said, three months forward. The banker might quote " $\frac{1}{25}$ cent under spot," meaning that if the spot (or ordinary) rate is 5 cents

to the lira, the three months' forward rate will be 4.96 cents. If a deal is made on this basis, the banker, three months from today, will give the manufacturer a draft on New York for \$100,000 in exchange for his check of approximately 2,016,150 liras. If, during the three months' interval, the rate in Rome should rise to 4.75 cents per lira,⁴ the manufacturer would neither lose nor gain.

From the foregoing discussion, it should be clear how an importer may protect himself by buying exchange forward. An exporter can, of course, likewise protect himself by selling exchange forward. For example, an American engineering firm is bidding for a contract to construct an electric power station in Mexico, under the stipulation "payment in pesos upon the completion of the work," which is estimated to last six months. The American firm calculates that its cost plus profit is \$2,100,000. If payment is demanded in dollars or if a wide margin as insurance against a possible depreciation of the peso is included in the originally quoted price, the contract might go to a competing firm. Under such conditions the firm's banking connection, upon consultation, will quote a rate over spot at which it is willing to buy the pesos for delivery three months forward, thereby establishing a basis upon which an exact cost calculation can be made.

How does the banker in turn protect himself against the various risks which he assumes as a dealer in forward exchange? In such business dealings, a banker runs two separate risks. First, there is a risk concerning payment. Will the Italian importer and the Mexican company be in a position to pay at the stipulated time? This is not a question of foreign exchange, but one of banking practice. At times, to eliminate this risk, the banker requires security to protect himself against his customer's inability to fulfill his contract. Second, the banker must protect himself against a loss which may accrue to him, arising from exchange fluctuations during the time his contracts run. Since he has balances on deposit with his foreign correspondents, if the amount in question is small and there is little likelihood of appreciable

⁴ This expression often creates confusion. A high rate of exchange in Rome on New York is the same as a low rate of exchange in New York on Rome. A rate of $4\frac{1}{2}$ cents in Rome constitutes a high rate because the Italian buyer of dollars would receive less cents per lira than would be the case if the rate were $5\frac{1}{2}$ cents per lira. On the other hand, to an American importer buying liras, a rate of $4\frac{1}{2}$ cents is lower than a rate of $5\frac{1}{2}$ cents per lira.

exchange fluctuations, he can "run" the deal. At the end of three months, his deposits abroad will be depleted if he sells forward exchange or increased if he buys forward. When large sums or a large total of small sums are involved, he must cover himself immediately.

Assume that a New York bank sells a customer pounds three months forward at 2 cents under spot and that as the spot rate is \$3.70, the forward rate is \$3.68. The bank could, of course, try to get in touch with another bank, through a broker, which has just effected a reverse transaction. Since this is practically impossible, the usual procedure is to save up all forward deals until toward the close of the day. Naturally, the bank has to watch the spot rate. To eliminate any losses arising from changes in the spot rate during the day, the bank immediately after a sale of forward pounds to a customer buys the same number of pounds spot. At the end of the day, the forward pounds are bought, and the spot pounds which were bought as cover and which are now no longer needed are sold. By buying spot and reselling it when the forward purchase is made, a large loss from a fall in the spot rate has been avoided.

Summarizing, the banker making a forward exchange transaction runs two separate risks. (1) He assumes a major risk because of a possible change in the spot rate, with which he deals at once, and (2) he incurs a minor risk in view of a possible change in the margin between spot and forward rates, which he runs until the end of the day. The factors determining the margin spot and forward rates will be discussed later.

It should be distinctly understood that the forward exchange market does not exist as a separate market, but forms part of the regular foreign exchange market. There is every reason for maintaining one market since most important forward transactions are in the form of buying and selling spot against forward. If an American bank buys spot pounds and sells them three months forward, it has the use of the pounds for three months; on the other hand, the British bank concerned has the use of dollars over a three months' period. Such transactions of buying and selling spot exchanges against the sale or purchase of forward exchanges are termed "swap transactions," a term frequently encountered in financial reports.

The main sources from which forward transactions *between the banker and his customers* may originate are:

1. Visible and invisible exports and imports.
2. Hedging operations to protect assets and holdings of commodities abroad, whose price might be affected by exchange movements.
3. Various types of arbitrage operations. (Arbitrage in foreign exchange constitutes operations to profit by variations in the cost of the same foreign exchange, by variations in the interest rate on short-term investments, or by variations in gold prices in different financial centers.)
4. Speculating in forward rates.
5. Operations of banks possessing no foreign exchange departments or whose names are not taken in the market for forward transactions.

The larger volume of forward exchange operations originates, however, between banks operating in the market through:

1. Covering of positions arising from transactions with other banks as customers.
2. Covering of bank balances maintained in foreign currencies.
3. Covering of acceptance credits, particularly in case of finance bills.
4. Arbitrage operations, frequently the largest proportion of forward dealing between banks.
5. Borrowing through the forward exchange market.⁵
6. End-of-month or end-of-quarter operations, resulting in repatriation of funds formerly held abroad.
7. Outright speculation.

THE DETERMINATION OF FOREIGN EXCHANGE RATES

Under a gold standard. — Variations in the demand for and supply of funds abroad bring about changes in the rates of exchange on foreign countries. But fluctuations in the rate of exchange of a

⁵ The forward exchange market constitutes an additional source, besides the internal money market, for obtaining short-term loans. An American and a British bank may engage in a swap transaction to remedy a shortage in exchange for particular maturities. This, properly speaking, is not a loan, for in exchange for a loan of dollars sterling is lent. But if, as is frequently the case, such a swap transaction includes the lending of the dollars obtained by the British bank, a loan proper has been made.

particular country's monetary unit are limited by the cost of shipping gold. As long as the unhampered in- and out-flow of gold is permitted, the rate of exchange in New York on London will vary only between the limits fixed by the cost of shipping gold from New York to London, or vice versa.

No American importer will pay more for a bill than the amount for which a corresponding amount of gold to the country of payment can be exported. No American exporter will sell a bill for less than the amount for which a corresponding amount of gold from abroad can be imported and sold in New York. A demand for sterling in excess of the existing supply of sterling exchange will force up the rate on London, if no additional supply of bills is brought into the market, until a point is reached at which it becomes profitable to ship gold. An excess of supply over the existing demand would naturally operate in the opposite direction.

The par of exchange. — The par of exchange, that is, the ratio between the mint prices of gold in England and the United States, was, prior to 1931, \$4.8665 to the pound sterling. The pound contained 113.0016 grains of fine gold as compared with 23.22 grains in the dollar. The amount of gold in the pound was, thus, $113.0016 : 23.22 = 4.8665$ times the gold content of the dollar. When the United States reduced the gold content of the dollar to 13.7143 grains of fine gold in 1934, the par of exchange between the dollar and the pound in the absence of a legal redefinition of the British monetary unit became £1 = \$8.24. This new par of exchange has never been made effective since England, like the United States, has increased the purchase price of gold in the market. Under present conditions, the reference to a parity rate, as indicated in figure 32, lacks all significance. As the following pages indicate, par of exchange cannot be determined without consideration of the purchasing power of a given monetary unit.

The gold points. — By purchasing gold in one country and shipping it for sale to another, a certain rate of exchange is obtained, called a gold point. The rate obtained by buying gold at home and selling it abroad is the export gold point; that obtained by buying gold abroad and selling it at home is the import gold point. The charges which the operation entails (assaying, freight, insurance, interest, and packing) must, of course, be added to the price

or deducted from the proceeds. Prior to 1931, a banker operating on a profit of $\frac{1}{4}$ cent on the pound sterling, assuming 2 cents per pound as the cost of shipping gold, could export gold with a profit whenever the bankers' demand rate reached \$4.8890. On the other hand, as long as the bankers' demand rate remained above \$4.8440, gold was not imported, as it would not have been profitable so long as the banker's profit was $\frac{1}{4}$ cent per pound and the shipping cost of gold per pound was 2 cents.

Since gold shipping costs vary with the size of the operation and according to the facilities enjoyed by the operators, they can only be approximated. Furthermore, some financial firms are able to obtain better terms for freight and insurance than others. *A gold point can never be stated as a definite figure.* This is particularly true in view of the fact that gold points may be quite arbitrarily determined, and because they constitute, under such conditions, a form of exchange control.

One additional point must yet be raised concerning gold points, namely, the question of the fineness of gold bought and sold. If various financial centers have different requirements as to the fineness of gold bought or sold, the gold points will be correspondingly affected. For example, by the Gold Standard Act of 1925, the Bank of England was only bound to sell gold in the form of bars of 400 ounces of standard gold, $1\frac{1}{2}$ fine. Until the early summer of 1930, the Bank of England sold gold in fine bars. At that time, since its stock of fine bars was running short, England decided to revert to its legal right of selling only standard gold. Most of the gold went to the Bank of France which was, however, only prepared to accept fine gold. Hence all gold going into France from the Bank of England had to be especially refined before the Bank of France would consent to accept it. This not only meant refining costs in addition to the other regular shipping charges, but also additional loss of interest on funds while in the refiner's melting pot. Moreover, the London refiners could only work about \$1,500,000 worth of gold in a day. As a result of this condition, the French import gold point fell considerably. Late in 1930, there was such a demand for francs in London that many bankers, rather than wait for gold which could only be exported at the slow rate of \$1,500,000 per day, preferred to bid for franc exchange at a price well below the previous gold point.

Summarily, under a gold standard the fluctuation of exchange rates is ordinarily limited within a narrow band, conditioned by the varying costs of importing and exporting gold. Under unusual circumstances, however, exchange rates may fluctuate widely from par even though there are no restrictions on gold shipments. For example, prior to and immediately after the outbreak of the World War, Europeans withdrew their funds from the United States in such volume as to force the pound rate for demand bills up to \$5.00 and the cable rate above \$6.50 to the pound sterling. It was impossible for bankers to make arrangements for gold shipments sufficiently large to prevent such rates temporarily from rising considerably above the gold export point in New York.

Exchange arbitrage. — Markets today are so closely connected by rapid communications that sterling cables in New York, in the absence of state interference, can sell precisely at the same price at which dollar cables are quoted in London. If differentials occur, arbitrageurs will come into the market. Assume the sterling cable rate in New York to be \$3.7125, the dollar cable rate in London to be \$3.71. In cooperation with his correspondent in London, a New York banker sells 1,000,000 sterling cables in New York for \$3,712,500, and \$3,710,000 dollar cables in London for 1,000,000, which will cover the New York transaction. The \$3,710,500 will cover the London transaction with a profit of \$2,500 minus expenses.

By selling dollars in London, the dollar will be weakened, that is, the pound will command more dollar exchange. By selling pounds in New York, sterling will be weakened, that is, it will command less dollars in exchange. Thus, the price discrepancy between the two markets is narrowed and if the arbitrage volume is large enough, the discrepancy will disappear entirely.

It may, of course, be possible for the London banker to make this arbitrage transaction in cooperation with his New York correspondent. In this case, the London banker will sell \$3,710,000 dollar cables in London for 1,000,000, and 1,000,000 sterling cables in New York for \$3,712,500, which will cover the London transaction. The \$3,712,500 will cover the New York transaction with a profit of \$2,500 minus expenses.

If we assume the sterling cable rate in New York to be \$3.71 and

the dollar cable rate in London to be \$3.7125, profits can be obtained by the purchase of sterling cables in New York and dollar cables in London. A banker in either center will buy 1,000,000 sterling cables in New York for \$3,710,000 and \$3,712,500 dollar cables in London for 1,000,000, which will cover the New York transaction. The \$3,712,500 will cover the original transaction with an arbitrage profit of \$2,500 minus expenses.

The preceding examples are merely simple types of arbitrage transactions. It is quite possible that three or four currencies may be involved, in which case arbitrage becomes an exceedingly complex affair.

Gold movements. — A gold outflow will not continue indefinitely. The loss of gold will bring about certain conditions, providing interference on the part of the government is kept at a minimum, which will tend to remedy the situation. If a country's rate of exchange rises above the gold export point, a number of forces will begin to operate to stop it:

1. A gold outflow will decrease bank deposits and induce the banks to call in their funds temporarily invested in the short-term money market.
2. A reduction in the available supply of funds in the money market will provoke a rise in short-term money rates, attracting funds from countries possessing lower rates. Since money earns a higher interest rate, an inducement is offered not to transfer funds abroad.
3. The decline in the demand for and increase in the supply of foreign exchange will aid in bringing the rate of exchange below the gold export point.
4. A decline in the prices of securities and staple commodities may result from high money rates and may tend to discourage speculation.
5. Lower prices may encourage foreign purchases of securities and commodities, thus adding to the available supply of foreign exchange.

Before the advent of extensive state interference in the economic life of nations, economists generally held that monetary gold stocks tended to distribute themselves among countries on the gold standard in accordance with their need. However, the rigidity of modern price levels and the various control mechanisms introduced

since the World War, and particularly since the depression of the 1930's, greatly modify or even invalidate such assumptions.

Under a silver standard. — The price of exchange between a country on a gold standard and another on a silver standard cannot be determined by a definitely fixed par. The silver currency will always exchange for the price of silver, minus shipping charges, quoted in the gold country. Likewise, the gold currency will never be worth less than the price of silver, minus shipping expenses, quoted in the silver country. Thus, the par of exchange will be determined by the price of silver and, in view of the fluctuations of this price, will be a fluctuating par. If, however, the treasury of the gold country adopts a definite price at which it will purchase and sell silver at any time, a fixed par will be the result.

Gold arbitrage. — When a country has departed from its previously maintained gold standard, gold points are no longer operative as a check on exchange fluctuations. In recent years, however, a new form of arbitrage, termed gold arbitrage, has developed with consequent influence upon exchange rates. For example, as long as England maintained a private gold market after its departure from gold in 1931, it was possible to profit whenever gold could be brought from London below the \$35 per ounce offered by the United States Treasury. If a New York banker could buy enough pounds to purchase gold in London at a price of less than \$34.76 per ounce, he would do so, since the shipping charges plus one week's interest would run to about 24 cents per ounce. A continued demand for sterling at such a price would bring an end to gold arbitrage transactions as the price of sterling in terms of dollars would increase and a continued demand for gold would likewise increase the price of gold in the London private gold market. During 1938 and 1939, a large amount of gold came to the United States as a result of private arbitrage transactions.

The determination of forward exchange rates. — Forward exchange rates are usually quoted for 1, 2, 3, 4, or even 6 months forward; not many transactions are made in excess of six months for delivery of the contracted foreign exchange. Here, as in the spot market, rates are determined by demand and supply. Whenever forward sales of a currency exceed forward purchases, the forward rate on that unit will be quoted at a discount. If forward

purchases exceed its forward sales, the forward rate will be quoted at a premium. There is at least one important difference between the forward and spot markets. The demand for and supply of foreign currencies is much less influenced in the forward market by the transactions of importers and exporters than is generally true of the spot market. Very frequently arbitrage of one type or another, as well as pure speculation, dominates the forward market.

Interest arbitrage. — Assume that there exists a differential in the New York and London money market for 90-day money. If the rate is 1 per cent higher in London, an American banker could, by transferring funds to London, earn a higher return on funds than is possible by placing them in the New York market. He cannot make such a transfer of funds unless he can cover himself against a weakening of the pound; this he does by selling, say £100,000 worth of 90-day futures. Of course, if the discount on forward pounds is equivalent to or more than 1 per cent, such an interest arbitrage will not be made. Conversely, should the forward rate on pounds stand at a premium, the profitability of such a transaction is enhanced.

Under a paper standard. — The moment the gold standard is suspended, the automatic check on exchange fluctuations, limited by the cost of shipping gold, can no longer assert itself. Under such conditions, the supply of and demand for a particular currency will, over the short run, determine the rate of exchange. Over the long run, however, the external value of a country's money will be determined by its purchasing power compared to that of another country.

As has been stressed in preceding chapters, when we speak of changes in price levels or the purchasing power of a particular monetary unit, we must be careful to consider our basis for comparison and recognize the shortcomings of our measuring tools. For example, it has been seen how prices of finished goods tend to fluctuate much less than prices of raw materials. Then, too, there are problems in connection with constructing and weighting indices.

The purchasing power parity theory. — Assuming that we have, with due recognition of the problems involved, constructed indices to measure the relative value of the dollar and pound, the next step is to compare their relative purchasing power with the

rate of exchange between them. Let us further assume that at a given time a pound will buy as much in England as \$4.866 will buy in the United States. Suppose that within six months, British wholesale prices have risen from 100 to 115, and American wholesale prices, from 100 to 120. The rate between the dollar and the pound will no longer be \$4.866. In England, it now takes £115 to buy as much as £100 bought six months earlier. In the United States, \$120 buys as much as \$100 at the previous date. Therefore purchasing power par equals the former equilibrium rate multiplied by the ratio of the price levels in the two countries, or $\$4.866 \times \frac{120}{115} = \5.078 . This rate of $\$5.08 = £1$ is known as the purchasing power parity — that rate of exchange which at a given time equalizes the purchasing power between two currencies. It cannot be a fixed rate, as fluctuations in the price levels of the two countries cause the purchasing power parity to vary correspondingly.⁶

Despite its soundness as an explanation of normal rates of exchange, the theory has definite limitations. Various trade barriers today prevent imports and thus interfere with the equilibrium which would otherwise be established by the price levels of the diverse countries. Likewise, the prices of goods rise in varying degrees, whereas the purchasing power parity theory postulates an equal rise in the prices of all goods. Finally, the fact that not all goods and services enter into foreign trade complicates the task of constructing an index which expresses the relative command of monies over those goods which are exchanged between the two countries.

Professor Pigou, in his exchange equilibrium theory,⁷ qualifies considerably the purchasing power parity theory by resting the ratios between the price levels of two countries upon the prices of only those goods and services which are internationally traded. Commodity and security movements drive exchange rates toward the exchange equilibrium. Should the rate on London rise, it would become temporarily profitable to buy American staple commodities and securities and sell them in London. Competition

⁶ Professor Gustav Cassel, a modern proponent of the purchasing power parity theory, expressed it: "When two currencies have been inflated, the new normal rate of exchange will be equal to the old rate multiplied by the quotient between the degrees of inflation of both countries."

⁷ Pigou, A. C., "The Foreign Exchanges," *Quarterly Journal of Economics*, Vol. XXXVII, November 1922, pp. 52-74.

would, of course, soon drive the rate back. It goes without saying that here also a reasonably free movement of goods and capital is presupposed.

While it is true that a comparison between the internal purchasing power of the dollar and the pound will often help a businessman to decide whether he should purchase an item at home or abroad, it must not be forgotten that other considerations are to be taken into account. During the spring of 1937, rumors circulated that the United States might decrease the price of gold. As a direct result of these rumors, the value of foreign currencies declined in New York and the dollar appreciated abroad, for a lowering of the purchase price of gold would constitute an increase in the gold content of the dollar. Anticipating such action on the part of the United States, speculators abroad bought dollars and American speculators converted their foreign exchange holdings into dollars. Considerable profits could thus have been made had these rumors proved true, as a dollar representing $\frac{1}{30}$ of an ounce of gold, for example, would probably have commanded more pounds and francs in exchange. In this case, an idle rumor increased the supply of foreign exchange in the United States and the demand for dollar exchange abroad, with the result that the dollar appreciated in terms of foreign currencies. Later on another rumor stressing a further devaluation of the dollar brought about reverse transactions. It would be very difficult, indeed, to employ the theory of purchasing power parity as an explanation for transactions made in the hope of more or less immediately gaining from an appreciation or protecting oneself against a depreciation of a monetary unit. In recent times, safety and political considerations have been so important in determining supply of and demand for foreign exchange that purchasing power parity has lost much of its meaning as an explanation of a prevailing price of foreign exchange.

Aside from the internal purchasing power of a currency and certain abnormal occurrences, such as bullish or bearish speculations, the operations of an exchange equalization account may determine the price of a currency on a paper standard. But such forces cannot operate over the long run in complete disregard of the factors which determine visible and invisible imports and exports.

Overvaluation and undervaluation of currencies. — The concept of the purchasing power parity as the equilibrium rate of exchange between two currencies introduces the problem of the overvaluation or the undervaluation of one currency compared with another.

If the rate of exchange of one currency against another is at a discount compared with the established purchasing power parity, the currency is said to be undervalued in terms of the other country. This is the same as saying that the foreign exchange value of this currency is too low with reference to its internal value. If the rate is at a premium, it is said to be overvalued. If a country's currency is overvalued, it means its external value is high in relation to the internal value, using other currencies as a criterion. Such a condition may be remedied in two ways only: (1) by reducing prices and costs, which is always a difficult task to accomplish in view of the rigidity of modern prices, or (2) by lowering the exchange value of the currency. This, of course, assumes that prices abroad do not change so as to eliminate any necessity of adjustment.

Between 1928 and 1931, the pound sterling was clearly overvalued against the dollar. British internal prices and costs were too high to justify an exchange rate at the full gold parity of \$4.866, to which England returned in 1925. The extent of the overvaluation of the pound amounted to approximately 10 per cent, that is, the purchasing power parity between the dollar and the pound sterling was \$4.43 rather than \$4.86.

The result of such a situation is that the exporter of a country, whose currency is overvalued, competes at a disadvantage in the world's markets, while foreigners can sell their goods easily in their home market. Soon the balance of trade becomes unfavorable for the country with the overvalued currency and it begins to lose gold, if it is on a gold standard. If it is off the gold standard, its currency will depreciate against other currencies which may, in time, correct such an overvaluation. There is a tendency to restrict credit, raise interest rates, and depress internal costs. As a result, profits decrease, unemployment increases, and the revenues of the government shrink. Home industries ask for higher tariffs which, when granted, usually mean retaliation by other countries, further limiting the overvalued country's export possibilities. If there is a tend-

ency for capital to flee the country, foreign exchange restrictions may be introduced.

The problems created by overvaluation placed too heavy a burden upon England's foreign trade; therefore it went off the gold standard. The American dollar, between 1932-1933, was overvalued and American efforts to correct this situation resulted in a disastrous price decline. The overvaluation of the German mark prior to September 1939, partly explained Germany's need for foreign exchange restrictions.

Undervaluation has the opposite effects, namely more active trade, more employment, higher prices, and profits. There are, however, limits to these benefits:

1. There is a tendency for the exchange rates to rise, reducing the amount of undervaluation.
2. Countries with overvalued currencies try to protect themselves by imposing trade barriers.
3. Countries with overvalued currencies might devalue so that their currencies can become undervalued in order to reap the temporary benefits of undervaluation.

The belief that undervaluation of a currency necessarily is beneficial to a country is based on a typically mercantilistic view, that is, that exports are a desirable end in themselves. It is absurd to assume that a nation will profit simply by selling abroad at unwarrantably low prices, an action tantamount to giving goods away. In recent years, a currency warfare has developed as each country has attempted to establish a low exchange value for its currency in other countries. If a country received gold imports as a result of the undervaluation of its currency, prices would be expected to rise. To prevent this rise in prices and hence to maintain the undervaluation, open-market sales of securities may be made by the central bank in an attempt to neutralize the effects of the gold imports. A country wishing to obtain balances abroad with which to purchase stocks of raw or war materials may deliberately undervalue its currency irrespective of cost.

Balance of payments theory. — There is still another important theory which attempts to explain the forces governing the external value of a country's money. This theory emphasizes the changes occurring in a country's trade and capital movements as the main forces influencing foreign exchange rates and internal

prices. According to this theory, rates of exchange between two currencies, in the absence of control mechanisms, depend upon the status of supply and demand in the foreign exchange market. Supply and demand, in turn, are conditioned by a number of forces. Some of these influence the volume of imports and exports; others determine capital movements; still others affect short-term credit operations. The movements of forward exchange rates, or the anticipation of such movements, as well as previous movements of foreign exchange rates, are likewise among the factors determining supply and demand in the foreign exchange market.

If American exports should rise considerably over a period during which our imports decline or remain at their previous level, changes in the dollar's exchange rate and in our internal prices would be necessary to establish a new equilibrium. Without gold redemption, an adjustment would come primarily as a result of the dollar's increased international value. Again, the problem of causality is involved here. Are prices primarily affected by trends in capital and goods movements or do monetary policies affect prices which, in turn, influence the balance of payments and, hence, foreign exchange rates? It would seem as if the latter were more often responsible for changes than the former.

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CHAPTER XXX

THE GOLD STANDARD AND GOLD MOVEMENTS

Introduction. — In our introductory discussion of money, the characteristics and various types of the gold standard were presented. At this point, the development of this standard, its advantages and disadvantages, and the question of its future are given to form a background against which properly to appreciate the influences of a particular type of gold standard on the money and banking processes within national boundaries.

THE DEVELOPMENT OF THE STANDARD

The standard prior to 1914. — At the close of the Napoleonic wars, most countries were either on a silver or on a bimetallic standard, with the exception of England which had adopted a definite gold standard under the Coinage Act of 1816. The great gold discoveries of the nineteenth century in Australia, California, and later in Alaska, as well as improvements in mining processes, provided the physical opportunity and the stimulus for an almost universal transition from silver or bimetallism to gold. By 1914, practically every important commercial and financial nation had adopted gold as the basis for its monetary unit.

It will be recalled that a country is said to be on a gold standard when:

1. A gold unit has been established and endowed with free legal tender privileges.
2. Free or unlimited coinage is maintained.
3. No restrictions are placed on the free internal or external movement of gold.
4. All types of money are convertible into gold.

If these conditions are met, the working of an international gold standard is largely automatic and reciprocal because any movement of gold will bring about changes of a stabilizing nature in the country losing gold as well as in the country gaining it. This, of course, assumes that internal economic conditions and national policies do not prevent the changes from asserting themselves.

Gold movements. — International gold movements arise for a number of reasons, for example, payments made for goods or services purchased, interest or amortization charges, or for investment purposes, that is, capital transfers abroad. In addition to these regular and routine movements, other factors may cause gold movements. The large gold production in the second half of the nineteenth century caused a gold outflow from gold-mining regions. Again, an increase or decrease in the discount rate on the part of a central bank in a particular country may be accompanied by a gold inflow or outflow. An increase in the discount rate attracts foreign capital as higher profits are now to be made by a transfer of funds to the country possessing the higher interest rate; a lowering of the rate would have the opposite result. Since the early 1930's, prevailing political conditions have played a role of increasing importance in inducing capital transfers.

Differentials in national price levels, particularly prior to 1914, played one of the most important parts in the determination of gold movements. If, for example, prices fell in England by 20 per cent and maintained their former level in the United States, it became profitable for the people in the United States to buy British merchandise. Assuming a former price equality between the two countries, a suit of clothes formerly priced at \$60 in both countries could now be obtained for something less than \$60 from England. The American importers would bring dollars to their banks to exchange them for drafts drawn in terms of British pounds on English banks. Sooner or later, the deposits which American banks maintained abroad and against which these drafts were written, would be reduced so that gold shipments to England would become necessary to replenish the American funds on which to sell further drafts. The rapid and practically universal rise to importance of the economics of power and war with their concomitant sacrifice of economic well-being has all but eliminated differences in national price levels as an important determinant of international transactions.

Gold standard rules for banking. — When a commercial bank received gold, in the period prior to the establishment of central banks, its reserves were increased and its loans were expanded in order to take advantage of the opportunity to gain profits. When a financial institution lost gold, credit had to be contracted

in order to regain reserves. Such a credit policy was dictated to the banker, not by any consideration of the possible effect of his credit policy upon the price level and hence upon international trade, but by his desire and need for profits and protection against sudden deposit withdrawals.

Since the advent of central banking, the situation has not materially changed. While a central bank's actions are not determined by profit-making nor, as a rule, by an anxiety to protect itself against withdrawal of deposits, the international trade aspects of the gold standard induce it to expand credit if gold moves into its country and contract it should gold flow from it. Such actions are necessary. If the central bank permits and encourages a general expansion of credit to occur following a large influx of gold, the price and wage levels, as well as other money incomes within the country, tend to increase. Such a development is likely to lead to an expansion of imports which, in turn, redresses the balance of payments originally responsible for the gold inflow. To reduce an outflow of gold, the central bank tightens credit to effect a decline in the country's price, wage, and income structure. The result of this action is likely to be a rise of exports as compared with imports. The resulting change in the balance of payments thus tends to remedy the gold outflow. This, of course, assumes a high degree of flexibility within the national economy.

The checks on an outflow of gold. — Under a gold standard, an outflow of gold does not continue indefinitely, for it automatically brings about conditions acting as a check on the loss of gold. After a country has suffered substantial gold losses in making payments for increased imports, the following compensating changes might occur:

1. Under a system of flexible prices, the loss of home markets forces domestic producers to meet foreign competition by lowering their prices, assuming that no protective tariff is passed to offset an existing price differential. Marginal producers may be forced into liquidation, throwing cheap supplies on the market.

2. Under a flexible price structure, a contraction of money and credit arising from gold losses brings about a general fall in prices because

- (a) Importers presenting their checks in payment for foreign exchange at the banks decrease their own and hence the

banks' total deposits. Banks are thus forced to draw upon their surplus funds, which most likely have been invested in the short-term money market. Should this step be insufficient to offset the losses in deposits, a tightening of the loan policy will be necessary in the absence of large investment portfolios.

- (b) A reduction of the supply of money tends to raise interest rates, assuming that general business conditions do not materially alter the demand for funds.
- (c) Assuming that no changes have occurred in the demand for and supply of goods and services nor in the velocity of circulation, contraction of money and credit tends to bring about a general fall in prices. If M and M' are reduced with V and V' remaining stable, the same amount of goods and services can be sold if only prices drop by a corresponding amount. Should prices remain the same, it is obvious that a part of the goods and services would remain unsold. This *general* fall in the price level tends to restore price equality between the countries involved and automatically prevents further excessive imports from the low-price country. Only those goods and services will be bought abroad which, due to economic advantages, can be produced cheaper in foreign countries than at home. If, on the other hand, the *general* fall in the price level exceeds the point at which an equilibrium is reached between the national and world price levels, a movement opposite to the one described results. An influx of gold, due to net commodities and services exports, increases deposits and hence bank credit which, in turn, effects an increase in money and credit and, thus, higher prices until the movement reaches a point at which an equilibrium is attained.
- (d) A contraction of money and credit as a result of a gold outflow causes an increase in money rates and thus tends to assuage the efflux of funds because the yield on most investments has been improved. Additional funds, in the form of gold, may be attracted from abroad by the prevailing higher money rates.
- (e) High money rates may tend to curtail speculative buying

of both staple commodities and securities, as these activities are usually carried on, to a large extent, with borrowed money. A consequent fall in their prices stimulates foreign purchases of these items and decreases gold outflow from this country as such purchases increase the funds of financial institutions held abroad.

Under the reciprocal and automatic action of the gold standard, a gold outflow never continues indefinitely. Some or all of the aforementioned factors set forces in motion which tend either to neutralize or to reverse the former gold movements. As long as this mechanism of adjustment of international balances of payments operates, gold movements may cause a temporary maldistribution of gold, but in the long run the forces described tend to restore a balanced situation.

Prewar interferences with the gold standard. — Not infrequently one encounters statements which contrast a managed international monetary standard with the allegedly unmanaged or unplanned *laissez-faire* gold standard. Such a contrast is too sharply drawn, since the gold standard prior to 1914 was managed to a considerable degree. As a matter of fact, it is incorrect to employ the term automatic action in reference to the gold standard because such an automatic standard has never existed. Such a concept is a convenient theoretical frame against which the banking and state controls, introduced from time to time, are measured. A number of such controls existed in the world prior to 1914:

1. The circulating medium was held to certain desired limits which tended to affect price levels and hence gold movements.
2. The fixing of discount rates was of great importance in influencing gold movements. This procedure was developed rather early in England.
3. Open-market operations, that is, purchases or sales of securities in the open market by central banks, also existed to some degree prior to 1914. By such actions, money and credit were either increased or decreased with a corresponding influence on prices and, ultimately, gold movements.
4. Still another policy was employed which served to iron out seasonal gold movements. At one time of the year, crops moved to the international markets, resulting in gold movements to the selling country;— payments for manufactured imports,

effecting an outflow of gold, had to be made at another time. To prevent such needless gold movements and frequent disturbances of national money markets, central banks bought up excess foreign exchange at one time and released such funds at a time when the demand for foreign exchange exceeded its supply. By such action, excessive fluctuations of exchange rates and gold movements were prevented.¹

The interference with the automatic working of the standard was not undertaken to interfere with foreign exchange rates, but to safeguard the gold reserves in times of pressure. Credit arrangements to support foreign exchanges at a particular level were practically unknown prior to 1914. In contrasting prewar and postwar international standards, the significant point is not the similarity in management but the dissimilarity in the objectives of management.

The assumptions of automatic actions. — In order to make a proper contrast between prewar and postwar monetary conditions, it must be recalled that the automatic and reciprocal action of the gold standard is based on a number of assumptions.

1. *A flexible price structure must be maintained.* — Only when prices permit the adjustment of an outflow or inflow of gold can a reasonable distribution of gold stocks be maintained. A country losing gold must experience a decline in the general price level in order to permit increasing exports of goods, resulting eventually in a reversal of the gold current. If prices do not decline, a country is forced into a very painful process of depletion of bank reserves and ultimate abandonment of the gold standard.

2. *No undue interference with the flow of international trade can be permitted.* — Only in the absence of excessive trade barriers can the country losing gold recoup its losses by exports to other countries. If ready access to foreign markets is denied and if no loans are extended, debtor countries are forced to abandon gold. International loans, however, only defer the problem. They may be advisable in some instances in order to permit a longer period to elapse in which to complete the equilibrium between two national economic systems. Tariffs may be moderately increased at times and will not constitute a major obstacle to international trade as

¹ The German economist, George Friedrich Knapp, was one of the first to advocate this in his *The State Theory of Money*.

long as nations maintain strict adherence to the unconditional most-favored-nation clause under which existing rates are extended to third countries.

3. *The rules of the gold standard must be scrupulously observed.* — A loss of gold must not be counteracted by an expansion of credit at home, otherwise the anticipated fall in the price level, so essential to the automatic and reciprocal action, will not occur. Similarly, effects of a gold influx must be permitted to assert themselves.

As long as these criteria for a satisfactory working of the gold standard are maintained, monetary gold stocks tend to distribute themselves in accordance with the need for gold on the part of each country. The standard broke down when, particularly in the post-war period, conditions arose which prevented this automatic and reciprocal action. It is well to state in this connection that in our presentation so far we have assumed gold movements to be caused by such long-term forces as normal capital movements or merchandise balances. Short-term movements may wisely be offset by attempts to perpetuate conditions which had existed in the money market prior to the gold movements.

The standard during the war. — Prior to 1914, the world found its equilibrium in the exchange between the raw-material and manufactured-goods producing nations. Capital was flowing rather easily from the more highly-developed to the less well-developed countries. The fact that the older countries were ready to supply durable goods to the newer countries without demanding immediate payment for such goods made the pre-1914 volume of international trade much larger than it would have been, had it been solely a question of simultaneous barter. Gold parities were fixed and, with some minor exceptions such as some Latin-American countries, no serious friction developed.

Prior to 1914, with the exception of England, there existed practically no monetary management. In this country, the quantity of money, in the absence of a central bank standing between the gold reserve base and the credit superstructure, was primarily determined by the interaction of self-regulatory forces. Commercial banks possessed some leeway in the creation of deposits. But in view of a well-established tendency toward capacity utilization of monetary resources, such a flexibility was restricted by the inflow

and outflow of currency into and out of the banks and fluctuations in hand-to-hand circulation. Then, too, there was a certain flexibility in international gold movements and the velocity of circulation. Within these narrow limits, any factor creating pressure for expansion or contraction was free to exert itself. The convertibility of money assured practical stability in foreign exchange rates and the price adjustments, incident to gold movements, always tended to force the international cost structure toward a position of equilibrium.

There is, however, a tendency to ascribe to the pre-1914 gold standard a natural workability which a study of the economic forces in motion at that time does not seem to warrant. The successful working of the prewar automatic gold standard was greatly aided by the fact that it operated in a rapidly expanding economy with the phenomenon of rising prices. As long as population increases and markets continuously widen, maladjustments can be much more easily and speedily corrected than when low investment activity and falling prices prevail.

The World War suddenly changed all this. In addition to the normal interferences with the automatic working of the gold standard discussed in the preceding pages, the following practices developed:

1. *Gold embargoes.* — An embargo on gold prohibits the exportation of gold and is tantamount to the abandonment of the standard. Great Britain, in May 1917, and the United States, in September 1917, adopted this measure. Such a step is justifiable in times of pressing financial difficulties. Under less stringent conditions, an embargo tends to destroy the international credit standing of a nation.

- (a) Under the gold standard, exchange rates will not rise above the gold export point as no businessman would pay more for a draft drawn on a particular country than it would cost to ship gold. Preventing gold exports from acting as a check on rising exchange rates forces the premium in terms of other exchanges to abnormal heights. This, in turn, stimulates exports as foreign nations, owing to the prevailing low exchange rates, can purchase goods more cheaply. However, the country off gold must replace and purchase anew raw materials and foodstuffs at higher prices as its money will now buy less in terms of other moneys. If we assume unsound monetary

conditions at home, perhaps because of large government deficits and a lost war, such a process means rapidly mounting prices in the country not on the gold standard. It temporarily rides the crest of an artificial wave of prosperity, but it is in reality becoming poorer day by day. After the World War, because of the rapidly declining foreign exchange rate of the mark, it became very profitable to purchase goods in Germany. However, when Germany purchased raw materials abroad, she actually had to pay more for them than the amount at which previous goods had sold. This continued until the collapse of the German monetary unit under an increasing impoverishment of the entire nation. The American or British embargo brought about none of these effects as it was used during wartime and for noncommercial purposes.

(b) An embargo on gold possesses another disadvantage. As long as a country is on gold, it will try to maintain an equilibrium between sales and purchases abroad by reinforcing a falling general price level with an increase in the discount rate, in order to be in a position to increase sales abroad. Being on gold means that an excess of imports over exports will have to be balanced by gold exports. As long as international prices are regarded as the sole criterion in the determination of the flow of trade, an outflow of gold will bring about falling prices. If gold is prevented from leaving the net importing country, the situation will remain distorted as prices will not fall to effect an eventual readjustment.

(c) An embargo on gold usually means suspension of internal convertibility which constitutes a temptation for a government to expand the circulating medium to inflationary proportions. Suspension of convertibility might also encourage the central bank to carry on dubious monetary experiments, likely to intensify an already existing inflationary trend.

(d) Under a gold exchange standard, a central bank keeps foreign balances, which constitute the large part of its reserves, on deposit in a country on a full gold standard. This is done in the anticipation that such balances will continue to be redeemed on demand in exportable gold at the price in existence at the time when the balances were acquired. Should the gold standard country impose an embargo on gold, the monetary stability of the gold exchange country is endangered, for its central bank reserves are temporarily impounded and are likely to fall in value.

2. *Earmarking of gold.* — When the Bank of England asks the Federal Reserve Bank in New York to earmark \$10,000,000 worth of gold, such gold is set aside for the account of the Bank of England and kept in the Federal Reserve bank's vault at the disposal of that foreign bank. As far as bookkeeping transactions are concerned, the gold is as good as exported; it is immediately subtracted from the American monetary gold stocks. The gold, while still in New York, is now the property of the Bank of England; it is added to its assets and constitutes part of its reserves. Since the World War, earmarking gold has become an established practice. It constitutes an inexpensive and efficient way of increasing national reserves without shipping gold; it is a particularly useful device during temporary financial stringencies of a central bank. At times, gold has been earmarked to exert pressure on the country, which has lost earmarked gold from its reserves, to raise the discount rate and thus increase returns to capital invested in that particular country. Earmarking of gold can be used as a pawn in the game of power politics, for a release of badly needed earmarked gold may be made contingent upon the fulfillment of certain political promises.

3. *International monetary cooperation.* — One result of the World War period was the stimulus it gave to cooperation between central banks, between private financial institutions and a central bank, or between foreign governments. Whereas prior to 1914, each individual nation attempted to interfere with the automatic and reciprocal actions of the gold standard as it saw fit, the war period witnessed transnational efforts to intervene in the natural working of the standard. While all warring nations sooner or later placed embargoes on gold exports, this new form of control over gold movements came somewhat later. Perhaps the reason for this delay was that the world in 1914 did not realize the financial consequences of a world war. On the basis of previous experience this is understandable. The Franco-Prussian War of 1870-1871 left currencies of victor and vanquished practically unaffected. French currency depreciation was less than 4 per cent while the victor's money exhibited no premium in terms of other exchanges. This could only happen as long as speculation in foreign exchange and forward buying and selling were unknown.

Within one year after the beginning of the first World War interesting changes occurred. The English Treasury, in order to forestall

a further drop in the exchange rate of the pound, commissioned J. P. Morgan and Company in New York in 1915 to buy unlimited amounts of sterling at the fixed rate of $\$4.76\frac{7}{16}$. At first, the funds for this operation came from gold shipments to New York and sales of British-owned dollar securities and, at least in part, by outright loans floated in this country. With the entry of the United States into the World War in 1917, it was the United States Government which, through interallied loans, made funds available to carry on such pegging operations.

The French franc was similarly pegged in relation to sterling. The operations were carried on by the Bank of France out of funds accruing from French borrowing in London and New York. Italy likewise pegged the lira against sterling. An exchange institute was set up which operated through banks abroad buying and selling lira at fixed prices in relation to the pound. Germany did not follow this practice, with the result that the mark fluctuated in neutral financial centers in relation to the prospect of a German victory or peace.

The important and interesting point in this connection is the fact that there was practically no active intervention with foreign exchanges. Operations were purely passive; for every pound offered for sale there were $\$4.76\frac{7}{16}$ in New York. This situation was in striking contrast to the methods adopted in the 1920's and particularly since 1931 when governments actively intervened in the market and took the initiative in the market to squeeze the bears who speculated on a future decline of a particular exchange rate. The surprising aspect of the period 1914-1918 is that, while a considerable pressure existed on the British pound, the stability of the dollar-pound rate was never placed in doubt. If buying and selling of forward exchanges had been practiced as widely as it was later, there would have been a considerable amount of speculative buying and selling of the pound in neutral countries with a consequent effect upon exchange rates.

4. *Tariffs as a control over gold movements.* — Prior to 1914, the purposes of customs duties were protection for domestic producers and revenue for the state. They were also employed, at times, to force another country to grant access to its market. But, in the prewar period, they were not used to control gold movements by curtailing imports and thus decreasing payments to be made abroad. As early

as 1915, England introduced the so-called McKenna Duties to mitigate pressure on sterling by curtailing imports. The higher British imports were, the more sterling would be offered for sale at the fixed rate and the more funds would be demanded to carry on pegging operations.

By the end of the World War in 1918, all countries were off the gold standard, either as a result of embargoes on gold exports or suspension of the conversion privilege. New control mechanisms had been introduced, the actual potentialities of which the world was wholly unaware. Moreover, at the end of 1918, fluctuations in foreign exchange rates increased and people became increasingly irritated over the continuation of these irksome wartime restrictions.

The return to gold. — Every effort was made in 1919 to go back to the halcyon days of prewar life, free of restrictions and costly interferences with the operation of economic forces. Travelling on the road to "happy, prewar days" was, however, exceedingly slow and sooner or later all countries abandoned the effort to return to them. The world has since gone in the direction of increased state intervention and control over the operation of monetary systems.

For several years following the World War, the United States was the only country which had returned to a gold (coin) standard. In other countries, primarily the neutral nations and Great Britain, existing control mechanisms were almost entirely eliminated. Pegging operations were discontinued and currencies were left to fight for themselves. Exchange speculation increased by tremendous proportions as it was believed that currencies would not return to their prewar parities. After a very short-lived recovery of currencies immediately before and after the Armistice, all European currencies rapidly declined in terms of dollars. Germany attempted for a while to stave off the ultimate collapse of the mark by shipping practically all her gold abroad. From 1921 on, stringent restrictions were introduced, but nevertheless capital continued to leave the country.

As early as 1920, at the Brussels Financial Conference, and again in 1922, at the Genoa Conference, the opinion was expressed that the restoration of the gold standard was mandatory to assure the success of economic reconstruction. But a complete monetary collapse in Central Europe occurred before decisive steps were undertaken to reestablish the standard. Between 1923 and 1929, partly

as the result of international cooperation (as in the case of Austria, Germany, and Hungary) and partly as the result of unilateral action, almost all countries returned to gold.²

The return to gold was not in the form of a gold coin standard except in the United States. Great Britain adopted a gold bullion standard; Germany and other countries, a gold exchange standard. All these steps tended to modify and hinder the automatic and reciprocal action of the gold standard.

THE COLLAPSE OF THE GOLD STANDARD

1. *The establishment of the gold exchange standard* impaired the reciprocal action inherent in a complete gold standard. When the Reichsbank in Germany redeemed its notes by exchanging them for a draft drawn on a New York bank, where a large part of its reserves were kept in the form of dollar deposits, its own reserve was correspondingly reduced. But in the United States payments were made out of the German reserve account to exporters who, in turn, would redeposit them with their banks. Total deposits within the American banking system were, therefore, not increased since only a transfer in the ownership of deposits had occurred. While credit conditions in Germany had been rendered more stringent, no increase in credit facilities had occurred in the United States to effect a corresponding price reaction.

2. *Central banks no longer played the rules of the game.* Instead of intensifying the reciprocal action of long-term gold movements by either increasing or lowering discount rates, European central banks would not infrequently tighten credit conditions at the time of an inflow of gold and ease them at the time of an outflow of gold. In order to follow the dictates of national policy, the rules of the international gold standard were ignored.

3. Another of the assumptions upon which the successful operation of the gold standard rested was *the maintenance of a flexible price structure*. With a tendency toward greater integration of large-scale business units, there came a greater rigidity in the price structure. When the total volume and velocity of money and credit decreased, a fall in output and hence employment occurred rather

² All countries returned to gold, except China and Persia, which were on a silver standard, and Brazil, Spain, Turkey, and several small countries, which were on inconvertible paper standards.

than a decline in prices. The attempts of large private interests or governments to prevent the fall of prices by production and price controls further increased such price rigidity. The rise of collective bargaining for wage contracts was an additional factor in this connection.

4. The rule that no undue interference with the flow of international trade should exist was likewise disregarded. Through the various peace treaties, new states were created which considered industrialization of formerly primarily agricultural regions of paramount importance. As countries saw foreign markets being closed to them, their native producers insisted on higher protection for the home market. The result was *continuously mounting trade barriers*, severely cutting the volume of international trade. For a while, debtor countries were able to remit for excess imports in the form of gold shipments, but sooner or later national gold stocks were threatened with exhaustion. In order to avoid the complete loss of gold, debtor countries decided to suspend (gold) payments either partially or completely. The United States postponed the final day of reckoning by embarking on a policy of granting foreign loans in large amounts. For example, foreign flotations from 1922 through 1928 amounted to more than \$8,000,000,000. As long as the United States offered a ready market for new foreign issues, Germany succeeded in making payments on reparations settlements, but increased greatly her indebtedness at excessive interest rates. The moment loans were no longer forthcoming to enable her to make reparations payments and to meet interest charges, she was entirely dependent upon exports in a world unwilling to accept them.

5. Another factor which complicated the situation was *the existence of a tremendous volume of liquid funds* readily transferable from country to country, depending on the degree of profitability of such transfers. Toward the end of the 1920's, any imaginary or actual threat to security of property caused capital transfers from one country to another at a moment's notice. The increase of *speculative buying and selling of foreign exchanges* accelerated the shifting of such nomad capital. These transfers were not connected with regular business activities and often caused a disruption of financial markets. The more uncertain the situation became, the more these funds would be shifted; this intensified the general feeling of uncertainty and insecurity.

6. The result of all these tendencies was a *maldistribution of gold* which drove national monetary policies more and more away from a *laissez-faire* policy.

During the second half of the 1920's, the international economic and financial structure was based upon the insecure foundation of foreign lending which could not be continued indefinitely. As long as foreign capital, a large part of which was American, continued to flow to the debtor countries, they experienced no difficulties in obtaining foreign exchange to meet payments on contracted obligations. When loans ceased to be available, the one main avenue for procuring foreign exchange was cut off.

Unilateral actions to stave off collapse. — Nearly all European countries during the 1920's were net importers, a status which they continued until well into the financial depression of the early 1930's. In the absence of loans, unfavorable trade balances could only be made up by shipments of gold from Europe to the United States. Countries which had just returned to gold found their gold or foreign exchange reserves dwindling. Fearing that they would be forced to relinquish the gold standard and compelled to return to fluctuating paper currencies, they attempted desperately to preserve gold holdings by restricting imports. As the one country's imports are the other's exports, such actions merely brought about a chain of retaliatory measures, accentuating the depression. Those countries which did adhere to the rules of the gold standard and which raised the discount rate when they were losing gold, found that increased interest rates resulted in a rise in cost of production, large enough to reduce production and employment in marginal industries. National considerations were responsible for the lack of adherence to the rules. Deflationary policies are usually painful in their execution. Moreover, since the conditions which would have guaranteed a reciprocal action in the country gaining gold were no longer in existence, little was gained by raising the discount rate. Other nations tried to effect a favorable balance of trade through increased exports at any price. The consequence of such action was only a further reduction in world prices and further increases in trade barriers through antidumping duties and other similar measures.

One policy which would have greatly aided in the attempts to save currencies, fulfill financial obligations, and maintain the volume of trade would have been a willingness on the part of creditor

countries to admit imports in excess of their exports and simultaneously to continue lending until the debtor nations could have attained net exports high enough to yield funds out of which financial obligations could then have been met. This, primarily for two reasons, the creditor nations were unable or unwilling to do. First, each government yielded to demands for increased tariff protection on the part of pressure groups; second, as confidence waned and large volumes of fugitive capital were shifted from one financial center to the other, there developed a feeling that, in self-protection, a nation should possess a margin in its international balance of payments large enough to act as a cushion against the violent impact of sudden withdrawals of foreign short-term capital.

The final collapse of the standard. — The postwar period of currency stability came to an end in 1931. A crisis which had developed in Austria earlier in the year, partly over the political question of a customs' union with Germany, brought about withdrawals of funds from that country and soon assumed world-wide proportions. When, in June of 1931, a flight from the pound developed, England found herself in the possession of huge amounts of short-term funds at home, but of equally large amounts of long-term investments on the continent, particularly in Germany. In July of 1931, Britain decided to counteract the selling pressure on the pound and contracted foreign credits. However, the amount of these loans was inadequate (about \$650,000,000) in the face of the flight from the pound so that they were soon exhausted. Only one device was left, namely, to cease intervening and abandon the gold standard. The pound was permitted "to find its natural level" without intervention, until February 1932. At that time, the British Exchange Equalization Account was set up to keep the fluctuations of foreign exchange rates in relation to the pound within desirable limits.

The Scandinavian countries, in view of their close economic ties with England, soon followed her example. India, Australia, Canada, and later the Union of South Africa, and all the nonself-governing colonies likewise left the gold standard. The American dollar was soon exposed to serious pressure from abroad. Within a few weeks in the fall of 1931, almost \$750,000,000, an unheard of amount at that time, was withdrawn in gold from the United States. The storm was successfully weathered as the

American gold supply was large enough (\$5,000,000,000 in "old" dollars) to meet demands, although the United States was then the scene of major banking disturbances. American gold stocks had continuously increased since the summer of 1928, when the discontinuation of foreign lending forced debtor countries to settle balances by gold shipments. The inflated security values on the American stock market also attracted large foreign funds for investment purposes.

The Japanese yen, at the end of 1931, was forced off the gold standard. The dollar and the currencies of Western Europe managed to survive repeated attacks, but everyone felt that abandonment of the gold standard in its prevailing form was merely a question of time. This feeling was confirmed in April 1933, when the dollar went off gold. Other currencies soon followed. Pressure on minor European and Latin American currencies resulted in a disorganization in these areas with a consequent increase of restrictions.

No matter whether a country tried to remain on gold or decided to go off,³ the result, as far as the world's monetary structure was concerned, was the same. When France tried to keep out imports by numerous devices and thus prevent an additional selling pressure on the franc, world markets were reduced. This, in turn, brought about a further decrease in prices and provoked additional protective measures which further reduced world markets. When, on the other hand, a country decided to abandon the gold standard, a reduction of prices measured in gold was likewise effected. Price declines affected chiefly the countries producing foodstuffs and raw materials, and in view of the great price flexibility of these items, such countries had already suffered most and were in danger of default.

Panics broke out with concomitant hoarding in what was deemed the safest form, gold. Every businessman feared the default of his creditors and questioned his own ability to meet maturing obligations. He desired liquid assets as a protection for himself. Deposits and frequently gold hoardings were preferred to investments. Often deposits were withdrawn, only to be converted into gold with a consequent strain on the banking system. Finally, the rapidly

³ The phrase "going-off gold" does not mean the elimination of gold for monetary purposes. If so, one would have to speak of a demonetization of gold.

developing scarcity of monetary gold increased its value and forced down commodity prices in terms of gold.

Summary. — The monetary reconstruction in the decade following the World War was not only carried out in an unfavorable atmosphere of economic nationalism, but other prevailing trends rendered its success impossible. The existing maldistribution of gold was a natural result of economic nationalism. In addition, two other contributing factors must be mentioned: One, the slowing down of the production of gold made it, at least, questionable whether world prices could be maintained at a desired level. The other, the prices in gold-standard countries were considerably higher than in 1914 under an almost uniformly unchanged price of gold in terms of principal monetary units.

The Financial Committee of the League of Nations advocated in 1929, through a special committee known as the Gold Delegation, economies in the use of gold. If the dollar and the pound had been devaluated at that time, accompanied by a radical change in commercial policies, the situation would have looked more hopeful.

Professor Heilperin characterizes the postwar gold standard in these words:

... the new system was intrinsically less stable, more vulnerable than the pre-war gold standard and ... this would have been true even if the gold exchange standard — a particularly great cause of instability — had not become widespread. If one considers the "level" of prices, the mal-distribution of gold and the volume of short-term funds available for international movements, gold reserves were indeed in most countries relatively small as compared with the volume of international transactions.

... the idea of stabilizing the "price level" led to the adoption of open-market operations of a type exactly opposed to those which would have been required for the maintenance of a long-run equilibrium in international payments.

The doom of the "new gold standard" was brought about by the obsession of an impending "scarcity" of gold and by the attempt to achieve price stability *against* the "rules of the game" instead of achieving it *in accordance* with and under the limitation of these rules.⁴

One distinction must be made between the post-1929 restrictions and the planless and indiscriminate protective devices of the 1920's. The crisis of 1931 forced a realization upon all that forces were at work jeopardizing the entire work of postwar reconstruction. The

⁴ Heilperin, M. A., *International Monetary Economics*, pp. 191-192. New York: Longmans, Green & Co., 1939.

world woke up to long-term problems created by the precariousness of foreign lending, by population trends, and by a great agricultural revolution. The tariff systems of the 1920's were not conceived in terms of national policies, but constituted a mass of multifarious legislation, the result of pressure politics. The crisis policies of 1929-1931 changed insensibly into the economics of rearmament and eventually war.

THE FUTURE OF GOLD

The current wave of popular interest in gold and its probable future is no new phenomenon in economic history. In the past, man has always been interested in the acquiring of the yellow metal. Nations desired it because it gave them power and a currency base without which, it was believed, no people could be completely confident of their money's quality. Individuals desired it because they believed it to be the safest and most liquid of all assets. Today, however, people question the alleged virtues of gold. They say there is too much gold; that it constitutes a threat of inflation; that gold will be demonetized; that it is not worth its present price; and so on, in the same vein.

It seems that a great deal of the present confusion concerning gold is due to a failure to distinguish between two problems: (1) Shall there be an international monetary standard with gold as its basis? (2) What shall be the immediate policy of the United States in regard to its "golden avalanche"?

Monetary nationalism versus monetary internationalism. — Generally speaking, there are three theories which prevail with respect to the continued use of gold:

1. Some insist that the gold standard has never worked very successfully and has outlived its usefulness with the practical elimination of "natural" competitive economic forces as price-determining factors. In place of the gold standard, a planned monetary organization is to be substituted, employing a standard of value expressed in terms of a managed, irredeemable paper currency related to a particular price index.

2. On the other extreme is the opinion of many business groups in this country that a world-wide gold standard, because of its stability and certainty, constitutes the one efficient monetary

system. Unless it is reestablished, the volume of international trade and of domestic credit and currency can never be maintained at a satisfactory level. Monetary planning results in an anticipatory and speculative attitude toward government action with concomitant uncertainty and indecision as regards future commitments and in generally low productivity and long-term involuntary unemployment.

3. The advocates of this view maintain that the gold standard has broken down because national monetary authorities were either unable or unwilling to play the rules of the game; in other words, purely national political and economic considerations prevented the creation of conditions indispensable to the proper functioning of the standard. As long as nations do not display a sincere desire to fulfill these conditions, restoration of the gold standard is pointless, for it will sooner or later break down again. This is sound reasoning on the basis of past experience. At the Genoa Conference, nations would not discuss reduction or elimination of excessive trade barriers, but followed the line of least resistance and went back to gold without taking action on this problem. The manifold trade barriers were one of the major reasons for the eventual breakdown in 1931-1933. As long as these barriers exist, a managed paper standard is to be preferred to the reestablishment of a full international gold standard. The monetary unit, without possessing convertibility, would still be expressed in terms of gold and gold would then be employed in the settling of international transactions.

Arguments for the elimination of gold. — It is argued that gold as the basis for our international monetary system has failed to provide a stable commodity price level. As a result of such lack of stability, debtor-creditor relationships are continuously being upset to the advantage or disadvantage of one or the other party. Moreover, an unstable monetary unit intensifies business cycles and may, under given conditions, become the chief cause of fluctuations in production. A stable commodity price level can be obtained only by linking our monetary unit to a price index, representing the individual prices of a large number of commodities rather than one commodity such as gold. Once this is established, money and credit must be managed in such a manner as to prevent substantial fluctuations in this index.

The preceding argument is based on the following assumptions:

1. Elimination of fluctuations in prices can be secured by a manipulation of the volume and velocity of money and credit.
2. Stability of commodity prices is desirable and beneficial to society as a whole. This again brings to the fore the question of an increasing efficiency in production. When goods are produced more or less efficiently, shall prices be maintained at their previous levels?
3. Nothing is said about keeping stability in foreign exchange rates. Such a system evidently visualizes a self-contained nation. Each nation has jurisdiction only over its own economy and can manage only its domestic price relations. Foreign exchange rates would still be left to find their "natural" levels or would have to be manipulated through the concerted action of the individual national monetary authorities. This would tend to give national monetary units a stable value in terms of other units relative to their purchasing powers. Again two questions arise:
 - (a) Can such international stability be achieved by monetary manipulation?
 - (b) Is it desirable that national monetary units should reflect changing degrees of economic efficiency by a fluctuating purchasing power?

The world-wide acceptance of a managed, inconvertible paper standard would, in the absence of free exchange rates, lead to the establishment of a number of completely independent national or regional monetary systems. To coordinate the independent units would necessitate either

1. The creation of an international monetary commission to regulate money and credit in all countries adhering to this standard, or
2. Agreement on the part of these various nations to act only in complete harmony with their common decisions.

Some economists do not regard such monetary compartmentalization as disastrous. They admit that an international monetary system has the following advantages:

1. It facilitates international commercial and financial intercourse.

2. Under the working of the theory of comparative costs, the benefits resulting from an international division of labor are conferred upon all peoples.
3. It permits an efficient distribution of gold according to needs.
4. Availability of localized natural resources is assured to all buyers.

On the other hand, these economists contend that an international monetary system also has one very important disadvantage, namely, each country's national economy is subject to foreign influences. One nation's monetary decisions will affect the other countries; the affected countries, however, have no control over such action. German economists stress the necessity for Germany's economic and financial independence of other countries. The more self-sufficient Germany is the less she will be affected by foreign monetary actions, such as a change in the purchase price of gold. Stable national conditions are preferable to international instability.

Why restore gold? — The argument for the restoration of the gold standard as a basis for an international monetary system is due to several fundamental disagreements with the preceding postulates inherent in the managed paper currency. Three of these arguments are as follows:

1. Those who believe in the restoration of gold feel that the advocates of a managed monetary system overemphasize monetary factors as determinants of price fluctuations. Such fluctuations are also related to a nation's general economic efficiency, technological trends, population movements, climatic changes, international conflicts, etc., all beyond correction by means of monetary counteractions. While it may be true that the volume of money and credit can be expanded or contracted according to needs, there is still the problem of velocity, one of the major monetary problems. Again there is the much-discussed question of the New Deal's failure to effect a specific reaction of prices to deliberate changes in the volume of money and credit.

2. Even assuming that a manipulation of money and credit will achieve stability of the price level, the question remains, will it entail any far-reaching beneficial effects? The gold advocates maintain that our general price structure is entirely too complex to be adequately expressed in so general a concept as a price level. Moreover previous experience seems to indicate that price changes occur-

ring in key commodities, for example steel, may substantially influence the general business trend.

3. The point most attacked by the advocates of gold restoration is the insistence of the managed currency proponents that the disruption of our international economic and financial interdependence does not constitute a necessarily disastrous trend. It was, so they retort, precisely this intensification in the international division of labor which brought about man's greatest economic and cultural development. To reverse this development toward still greater world interdependence would lead not only to a general economic dislocation with a consequent reduction in national standards of living, but also to international armed conflicts when some of these national compartments realized their economic inadequacy and embarked on a policy of conquest to obtain natural resources formerly obtainable by peaceful international cooperation.

The proponents of gold admit that violent fluctuations in commodities, especially those staple commodities moving in international commerce, are particularly injurious to national economies, when national and international price structures consist of flexible and inflexible prices. To remedy and mitigate such a constantly present threat to economic stability, joint actions must be taken, but, they insist, such preventive actions must include more than mere monetary policies in order to be effective. To obtain such action, the international gold standard offers every aid.

The combination of management and gold. — The attempts at international monetary reconstruction have led so far in the direction of combining an inconvertible, managed, national currency, defined in terms of gold, with the maintenance of gold as a means of settling international balances. In 1935, Donaldson wrote:

What would seem, however, much more feasible, would be a flexible cooperation, wherein those countries with currency management would enter into informal arrangements whereby their monetary authorities could consult with each other from time to time, with a view to managing their currencies in relation to each other in a manner which might allow for all the shifts that might be suggested by constantly changing conditions.' The fluctuations might not in this process be very great; other countries might gradually enter into the informal arrangements; and there might be preserved those advantages of flexibility which, to a certain extent, reside in the present management systems.⁵

⁵ Donaldson, John, *The Dollar, A Study of the "New" National and International Monetary System*, pp. 197-198. New York: Oxford University Press, 1937.

In view of the later understanding with regard to monetary policy between the United States, Great Britain, and France, to which other countries pledged adherence, this was an accurate prognosis. Today, the dollar is not convertible into gold, although it is defined in terms of a given weight of gold. Upon application to the Treasury, gold at a fixed price may be exported or obtained for non-monetary, industrial purposes. Little can be accomplished toward attaining any international monetary system as long as:

1. In the international price structure, only a part of the commodity prices are determined by natural market forces.
2. Debt controversies have not been satisfactorily adjusted and new international debts for nonproductive purposes are likely to be contracted.
3. Foreign exchange controls and other trade barriers are not substantially modified.
4. The maldistribution of gold has not been corrected.
5. No permanent system of central bank collaboration exists.
6. Existing political conditions do not permit any long-term economic planning.

TABLE 52. CHANGES IN MONETARY GOLD SUPPLY
1930-39

(In thousands of dollars)

<i>Year</i>	<i>Domestic production</i>	<i>Used in arts or recovered from arts</i>	<i>Total domestic increase</i>	<i>Imports</i>	<i>Exports</i>
1930	\$ 47,248	\$15,178	\$ 32,070	\$ 280,087	
1931	49,527	5,931	43,596	145,325	
1932	50,626	6,490*	57,116	.....	\$446,213
1933	52,842	5,793*	58,635	.....	173,455
1934	108,191	61,694*	169,885	1,133,912	
1935	126,324	32,461*	158,785	1,739,019	
1936	152,509	2,908*	155,417	1,116,583	
1937	169,159	3,214	165,945	1,585,503	
1938	148,600	.....	.....	1,973,600	
1939	159,800	.....	.....	3,574,200	

Source: Moulton, Harold G. and associates, *Capital Expansion, Employment, and Economic Stability*, p. 50. Washington, D. C.: The Brookings Institution, 1940.

* Excess of recoveries.

United States gold policy. — The phenomenal increase in the gold stocks of the United States, amounting in July of 1940 to more than \$20,000,000,000, is due to three factors: (1) enormous gold imports, (2) the devaluation of the dollar, and (3) an expansion of domestic gold production. (See Table 52.)

World gold production has increased to 40,000,000 ounces, approximately double the volume and more than three times the value of gold production in 1930. During the early 1930's, gold supplies were augmented by a great volume of dehoarding in the Far East. Today the monetary value of all known gold stocks in the hands of central banks and governments is about \$26,000,000,000, six times the total at the outbreak of the World War in 1914.⁶ According to the Board of Governors of the Federal Reserve System, the chief reason for the large gold imports into this country is the flight of capital from Europe due to potential and actual war conditions, in addition to the large payments on balance for American goods and services. A regular excess of American exports of goods and services has, of course, been a contributing factor.

In order to account for the present volume of American gold stocks, the \$2,817,000,000 profits on the 1934 devaluation must be mentioned. According to a recent Treasury statement, these profits have been employed for the following purposes:

Exchange Stabilization Fund	\$2,000,000,000
Federal Reserve banks for industrial loans (\$111,753,000 still unexpended)	139,000,000
Melting losses on gold coins	2,175,000
The retirement of national bank notes	645,000,000
The Philippine currency reserve	23,863,000
Unassigned	6,616,000
Total	\$2,816,654,000

This unprecedented accumulation of gold in one country has brought about a tremendous volume of discussion. A few years ago, at the London World Economic Conference, an undersupply of gold was looked upon as a major cause of the depression. Now, an oversupply brings suggested alternatives to a continuation of

⁶ In this connection, one might raise the question as to the importance a further release of Indian gold hoards might play in determining the future of gold.

our present gold policy of paying a fixed price for gold.⁷ Some of these suggestions are as follows:⁸

1. Lower the price of gold in the United States.
2. Set one price for domestically mined gold; another one, for monetary par; a third one as the world market price for foreign gold.
3. Levy a duty on gold imports and grant a bounty on gold exports.
4. Place an embargo on gold imports.
5. Cease buying gold.
6. Limit gold production by international agreement.
7. Make gold loans to enable foreign central banks to return to gold.
8. Give away part of the American gold stocks.
9. Reduce tariffs in order to obtain a net import balance and then export gold.
10. Increase the price of gold, let natural forces assert themselves and thus enable private and public debtors to repay obligations.
11. Establish a world currency by utilization of American gold stocks.
12. Wait to act until peace is restored.
13. Permit gold to exert its full effect upon the world economic structure.
14. Return to a complete gold standard with internal and external convertibility of currency in gold at a fixed price.
15. Set up a free gold market in the United States in addition to the Treasury.
16. Establish gold redemption of the currency at a flexible price for gold.
17. Permit only internal convertibility without reference to international relations.

⁷ One must distinguish between a gold problem in reference to the international maldistribution of gold and a gold problem in regard to the absolute scarcity or abundance of gold. A change in the price of gold would, of course, only be a solution for the latter. Strictly speaking, a gold problem does not exist unless the supply of gold threatens to interfere with monetary management. In view of the institutional arrangement of modern monetary systems, the relation between gold and prices is very indirect and uncertain.

⁸ A special bibliography on the gold problem is appended to the suggestions for further reading at the end of this chapter.

18. Circulate gold coins and gold certificates.
19. Broaden the powers of the Export-Import Bank of Washington and make it into a world bank.
20. Levy discriminatory taxes against all foreign capital in the United States.
21. Sterilize gold.
22. Authorize the Board of Governors of the Federal Reserve System to establish, at its discretion, member bank reserve requirements.

Probably Secretary of the Treasury Morgenthau came closest to an answer of the "gold problem" when he recently said:

There is only one sound way in which we can work to reduce the inflow of gold and to promote the return of at least a part of the wealth it represents to useful service in the lands from which it came. That way is to do everything in our power to contribute to the return of peace to the world and to encourage reconstruction and the restoration of normal trade.

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PART EIGHT
RECENT THEORY

CHAPTER XXXI

RECENT MONEY THEORY AND THEORIES OF CONTROL

Introduction. — This study of money and banking may be concluded on the same emphasis with which it was begun, namely, that the subject matter dealt with in this book is constantly changing under the impact of clearer understandings of old relationships and the rise to importance of new and challenging economic problems. The principles which are of greatest importance today will lose their prominence and be superseded by new ones; ideas which are expressed in the law likewise will change to new, and possibly better insights. Changes in the political structure and the scope of government will lead inevitably to changes in the relative significance and insignificance of various methods of money and banking control.

Since opinion concerning money and banking problems is so divergent, it is desirable as a final task that the direction of present thought be indicated. It is impossible here to include all recent contributions to the subject of money; therefore only the most widely discussed may be examined. In the field of theory, the most extensively discussed recent work is that of Professor J. M. Keynes' *The General Theory of Employment, Interest, and Money*; in the United States, the Hundred Per Cent Reserve Proposal has occupied the center of much professional debate concerning banking reform. The former is a work of such extensive heterodoxy that it is impossible to cover here all of its stimulating ideas. Many of these, as well as the central theme, are still the subject of vigorous debate, but little would be gained by examining them since the purpose here is simply to indicate the trend of thought.

RECENT MONETARY THEORY

It must be made perfectly clear that in choosing Keynes' work for examination here a certain injustice is done to a long list of important contributors of ideas, many of which are similar in their

implications to Keynes' work. The writings of the Scandinavian economists should be noted particularly, along with certain other outstanding English writers.

In the process of examining Keynes' ideas, two stages or parts may be distinguished: (1) the relation of income, consumption, and investment and (2) the determinants of the level of investment.

The relation of income, saving, and investment.¹ — Keynes classifies the goods produced by society as either consumption goods or investment goods. The total income of society (Y) is made up of income earned in making consumption goods (C) or of the income earned from making investment goods (I). $Y = C + I$.

Now C , which stands for income earned in making consumption goods, must also stand for the amount spent on buying consumption goods, since these two are in fact the same thing. (Similarly, I stands also for the amount of money spent on investment goods.) The aggregate amount of saving in any period (S) is defined as the excess of aggregate income in the period over the expenditure on consumption goods. This, the almost universal definition of saving, gives us our second equation $S = Y - C$. From these two equations it follows that saving must always equal investment. $S = I$.²

One may wonder why these terms must, of necessity, be equal since one individual may save without either himself investing or expecting another individual to do so in an amount exactly equal to his own saving. This proposition applies to aggregate saving and investment rather than to individuals' actions. An individual may reduce his volume of consumption when others are increasing theirs so that C remains unchanged.

This idea may be clarified by considering a case in which hoarding is supposed to occur. An individual who saves more than he invests, hoards the difference. But a different condition takes place when society attempts to hoard. Unless the monetary authority increases the amount of money, no more can be held than is in existence regardless of what effort is made to do so. Barring any change in this amount by the monetary authority, the same quantity of money will be held between any two dates. If the monetary authority increases the supply of money, there is no way by which the public can avoid adding to their hoards.

¹ This treatment of Keynes' work follows the summary of it by A. P. Lerner, "Mr. Keynes' 'General Theory of Employment, Interest, and Money,'" *International Labour Review*, October 1936, pp. 436-454.

² *Ibid.*, p. 443.

This does not mean that there is any divergence between saving and investment. There is indeed an excess of saving over investment by the individuals who are left with the extra money that has been put into the society and which must be in somebody's hands. But this is exactly balanced by the expenditure of money by those individuals who borrowed the extra money from the monetary authority (the banks). These borrowers were enabled by the banks to consume or to invest out of borrowed money that was not part of their income. In so far as they spent the money on consumption this constituted negative saving which has to be subtracted from the excess saving by the hoarders. The rest of the borrowed money is invested and provides the investment that balances the excess saving and shows again the inevitable equality of saving to investment.³

While it may appear from this discussion that Keynes is denying the possibility of any economic disruption from "hoarding," this is definitely not the case. Since net hoarding cannot take place, it is clear that the ill effects which the public identifies as hoarding are simply attempts to hoard. But these attempts have serious repercussions in the fall of prices, incomes, profits, and employment. With an increase in the desire to hoard, the public competes with itself in giving greater volumes of goods for money, in a futile attempt to increase its hoards of money.

We see then that decisions of income receivers as between spending and saving do not affect the aggregate volume of saving but do determine the size of both income and consumption. The difference between them, which is the amount actually saved, is determined by those who decide the size of I . . .

If we have given the size of I , we can say Y is determined by the propensity to save. If we suppose that the amount people save depends only on the size of their income, and that it increases with the size of income, we may say that income must be at that level where the amount people wish to save is equal to I .⁴

This relationship between income and consumption may be clarified by assuming that the public wishes to consume more than it is currently consuming. Such a case is the opposite of the attempt to hoard. The public's demand for consumption goods increases, leading to an expansion of employment and income until the amount they wish to save is equal to the amount invested. If the public wishes to spend less than it is spending, the case is identical with the attempt to hoard which diminishes income to the point at which the amount the public wishes to save is equal to investment.

³ *Ibid.*, p. 445.

⁴ *Ibid.*, p. 446.

The determinants of investment. — Capital goods are valued for the services which they yield, or which they are expected to yield in the future. This yield or efficiency of capital is one of the determinants of investment. "The marginal efficiency of any particular type of capital good is the efficiency of the marginal item of that type of capital good, in the use where its installation would show the greatest possible efficiency."⁵ If the yields of various quantities of capital were arranged, a schedule of the marginal efficiency of capital would result.

The second determinant of the amount of investment is the rate of interest. This rate, in Keynes' theory, is defined in a different way from that usually encountered in economics. In the theory described here, the rate of interest is the rate paid for borrowed money; or from the standpoint of the lender, it is the rate paid for surrendering the uses of money. This rate may also be considered the rate for not-hoarding. In order to perceive the relationship between the rate of interest and the holding of money, it is necessary to refer to Chapter XXII (The Demand for Money), in which Keynes' analysis of the liquidity motives was presented. These motives determine the demand schedule for money to hold and when matched against the supply of money, they determine the rate of interest. Increases in the supply of money, with a given liquidity preference, will lower the rate of interest, and decreases will raise it.

It should be apparent that a definite relationship exists between the marginal efficiency of capital and the rate of interest. If the former is higher than the latter, it will be profitable for the entrepreneur to borrow funds to acquire new capital goods. When he does so, the increases in the supply of capital goods will lead to two compensating changes: the larger supply of capital goods will reduce their value and the increase in volume of their production will raise the cost of making them. "For every rate of interest there is a corresponding rate of investment."⁶

Conclusion of Keynes' analysis. — The above statement of the relationship between income, consumption, investment, and their determinants leads Keynes to the conclusion that a greater degree of public control over economic life is required. Furthermore, he believes that if such control is exercised along the lines suggested, it

⁵ *International Labour Review*, October 1936, p. 448.

⁶ *Ibid.*, p. 449.

will have substantial chances of improving the level of income of the public. In the words of his leading exponent and interpreter:

Our conclusion is that the amount of employment can be governed by policy directed towards affecting the amount of investment. This may be done either by lowering the rate of interest or by direct investment by the authorities. There may be difficulties for institutional or psychological reasons in reducing the rate of interest to sufficiently low a level to bring about that rate of investment which, with the existing propensity to consume, is necessary in order to bring about full employment. It is because of such difficulties that Keynes thinks that public works are necessary, and may become more and more necessary as the wealth and capital equipment of the community increase. For this means that on the one hand people wish to save more out of the larger income corresponding to full employment while on the other hand the accumulation of capital lowers the marginal efficiency schedule of capital.⁷

Keynes believes that, in a society which has accumulated large amounts of capital with a resulting decline in the marginal efficiency of capital, investment opportunities may be difficult to secure. Moreover, a wealthy society may suffer a weakening of the propensity to consume. If these two conditions reduce the return to capital below the level of the rate of interest, the state will find it necessary to take a larger part in directing investment. When the yield on capital is lower than the amount required to cover risks and the cost of administering the loan, there will develop a virtually insatiable desire to hold money. Such attempts to hoard will have unfavorable effects upon income, as has already been noted. The consequent fall of income will reduce the propensity to save and eventually stop the decline. But this leads to a lower level of production than would be possible with existing equipment.

SUGGESTED METHODS OF BANKING CONTROL

As a final element in this study of money and banking organization, particularly as it relates to the United States, it is desirable to point the way in which suggestions for new controls are moving. There will always be proposals beyond those already adopted in the fields of monetary thinking and theories of control which may become the basis for the standard practice of tomorrow. The inclusion of these suggested instruments here does not imply that they will actually become effective in the future. Our purpose is to

⁷ *Ibid.*, p. 452.

show the trend of thought at present; this discussion should also provide an appreciation of contemporary problems and an insight into professional thought about them.

Bond sales as control devices. — The purchase and sale of bonds have already been discussed as means of control frequently employed in the past by the Federal Reserve authorities. The instrument to be discussed here is not different in its mechanical features from the previous discussion; the point of difference is in the purpose for which bond sales are made.

Whittlesey⁸ has recommended that bond sales by the Federal Reserve authorities be timed so as to affect the level of bond prices. He considers that such a method of operations with the Federal Reserve bond account would be a potentially powerful means for inhibiting an excessive expansion. The historical trend which forms the basis for the suggestion is that, since 1890, the percentage of total bank loans and investments represented by the latter has steadily increased from about one-seventh to two-thirds of the total loans and investments.

This enormous growth of investments has made bankers especially sensitive to changes in the level of bond prices, particularly to a decline in their prices, which makes it possible for the Federal Reserve authorities effectively to control an expansion of credit. "By selling a relatively small block of government bonds in the open market, the Federal Reserve could probably depress bond prices by an appreciable amount. This would be virtually certain to alarm the bankers, with the probable result that they would be willing to accede to the wishes of the reserve authorities. . . ." ⁹

Whittlesey believes that the banking community is too uncoordinated to agree upon bond purchases to support the market when sales are being made by the Federal Reserve banks. Moreover, such purchases are considered unlikely when the prices of bonds are falling. He thinks, however, that the greatest disadvantage of this instrument may be that it will prove too powerful:

Is it to be expected, for example, that the Treasury would permit the adoption of policies which entailed unsettling the market for government bonds? Might not the use of this instrument induce a wave of selling on the part of the banks

⁸ Whittlesey, C. R., "A New Instrument of Central Bank Policy," *The Quarterly Journal of Economics*, November 1939, pp. 158-160.

⁹ *Ibid.*, p. 158.

that would cause bond prices to fall more than was intended? Would public, that is, banker opinion tolerate the pursuit of policies that were directed toward the depreciation of bank assets? Such considerations, turning as they do on the possibility of the measure proving too drastic, are especially significant at a time when we are accustomed to think of the effectiveness of traditional Federal Reserve policies as pretty much a thing of the past.¹⁰

This suggested means of control seems to be not unlike ordinary open-market operations except that, while open-market sales have been directed toward affecting the reserve position of the member banks, this means of control would be employed to affect bond prices. Precisely the same action is undertaken in both instances; hence, any effort of the Federal Reserve to sell bonds in carrying out its traditional open-market sales would have the related effect of changing the prices of bonds at the same time that member-bank reserves were reduced. It appears, therefore, that the uniqueness of this suggested instrument lies in the emphasis which it gives to the changes in bond prices accompanying open-market bond sales. As the portfolios of banks show increased holdings of bonds, it becomes more difficult for such sales to be undertaken without widely ramifying effects on bond prices, bank earnings, and bank solvency, and on government fiscal problems.

The hundred per cent reserve proposal. — Probably the most widely discussed plan for control of the supply of money in the United States today is the suggestion that the expansion and contraction of bank credit should be eliminated by requiring banks to maintain reserves of 100 per cent against their demand deposits. The theory upon which this proposal is founded is that alternating expansions and contractions of credit are the chief disruptive influences in modern economic society. Although these expansions and contractions probably do not originate the movement of the business cycle, they have the effect of greatly magnifying the original cyclical impulse. (This would be denied by the theorists who argue that monetary factors do originate the cyclical movement.) In view of the fact that most accounts of business-cycle movements place considerable emphasis upon money and credit factors, it is easy to understand why this proposal has received such widespread support.

¹⁰ *Ibid.*, p. 159.

The mechanics of the plan. — The original plan for 100 per cent reserves which was proposed by Soddy ¹¹ has been modified in the discussions growing out of it. The mechanical features presented here are adapted from Watkin's ¹² summary of these various suggested modifications of the original plan.

In studying the 100 per cent reserve plan, it should be remembered that at the present time the chief assets of the commercial banks are cash, deposits with other banks, loans and discounts, and investments. The items "due from banks" or "due from Federal Reserve" are the reserves against the demand and time deposits which constitute the banks' chief liabilities, along with the items of the capital account. The expansion of credit under present conditions comes about because the banks hold reserves substantially less than the volume of their deposit liabilities. Thus a bank statement today may appear as follows:

<i>Assets</i>		<i>Liabilities</i>	
Cash in vault	\$ 3,000	Demand deposits	\$30,000
Due from Federal Reserve	5,000	Time and saving deposits	15,000
Loans and discounts	20,000	Capital account	8,000
Investments	20,000		
Building	5,000		
	<u>\$53,000</u>		<u>\$53,000</u>

The 100 per cent plan requires that either the government or the Federal Reserve banks take over enough of the assets of the banks, issuing noninterest-bearing notes therefor, to provide a full reserve for all demand liabilities. This plan would mean that the bank represented by the statement above would have to acquire \$22,000 of notes [$\$30,000 - (5,000 + 3,000)$]. These notes could be secured by discounting the loans with the monetary authority, that is, the Treasury or the Federal Reserve banks, or through the sale of part of the investments. After this had been accomplished, the *commercial* part of the bank would have assets of \$30,000 in cash in vault and credit balances with Federal Reserve, and liabilities of \$30,000 in demand deposits.

If it is assumed that the bank rediscounted all of its loans and sold

¹¹ Soddy, Frederick, *Wealth, Virtual Wealth and Debt*, 2nd Edition. New York: E. P. Dutton, 1933.

¹² Watkins, L. L., *Commercial Banking Reform in the United States*. Michigan Business Studies, Vol. VIII, No. 5, 1938, pp. 1-55.

\$2,000 worth of investments to meet the new requirements, the statement of the *savings* department would appear as follows:

<i>Assets</i>		<i>Liabilities</i>	
Investments	\$18,000	Time and savings deposits	\$15,000
Building	<u>5,000</u>	Capital account	<u>8,000</u>
	\$23,000		\$23,000

It can be seen from this illustration that the proposal would only provide cash reserves for the demand liabilities. In practice, the savings department would require a certain amount of cash to meet its expenses and to pay the depositors who desire to withdraw balances, after proper notice had been given.

The mechanical effect of the adoption of this proposal would be to assure demand depositors against losses arising from bank failures. All such deposits would be completely covered by reserves of cash. Another effect would be to transfer the business of making short-term loans to the savings department which would be limited in its loans to the amount of its savings and time deposits plus capital account minus operating cash balances and investment in such banking facilities as buildings. It should be clear, therefore, that under this plan the banks would not be able to add to the existing supplies of money by creating deposits.

Advantages claimed for the plan. — The first advantage claimed by the proponents of this reserve organization is that it returns to the government the power to issue money. In the process of making loans, under the fractional reserve system, the banks have been able to combine the functions of lending and of money issue. This gives the banks an illogical, capricious, and disruptive control over the communities' money supply, which is avoidable. The segregation of these two functions will permit the regulation of the supply of money in accordance with the requirements of the economic system, without making this supply depend upon the volume of bank lending.

The method of accomplishing this would be to determine social needs for money according to the growth of population, changes in circular velocity, etc., and issue additional money supplies when needed. This money might come into the system through the purchase of additional bonds by the monetary authority, or by issue through Treasury expenditures. Hence the determination of

the volume of money would depend upon the rational interpretation of the monetary requirements of a given period. This is contrasted with the prevailing system whereby the volume of money is determined, on the one hand, by the reserve position of the banks, and the bankers' judgment of the quality of the applications for loans and the desirability of investment at current yields, and on the other hand, by the requests of customers for loans.

A second advantage assumed by the advocates of this plan is that it permits the management of money to be directed toward the stabilization of prices. Such control would necessarily require short-term changes in the money supply. Not all of the proponents of this plan agree that price stabilization should be the guide for the monetary authority. Some would have a simple, unchanging rule adopted while others would permit the supply of money to be modified only with the secular expansion or contraction of the economy.

A third, and very forceful advantage claimed for the plan is its assurance of ending commercial bank failures. Depositors who wished absolute security would be able to obtain it with demand deposits; those who desired earnings with some protection would place their funds with the savings department. This plan promises to rid the present system of the curse of failing institutions, which dump collateral on the market, and induce a sharp rise in the public's desire for liquidity. Though this condition could still develop when the public sells securities, one reason for its occurrence would have been removed.

Still another advantage claimed is that, instead of the government having outstanding a large volume of bonds upon which it would have to pay interest, its debt would consist of a noninterest-bearing note issue. This would reduce the cost of operating the government. Such an argument seems to be based on the idea that banks make excessive profits or that the cost of banking services should be borne by a different group of individuals. Under present arrangements, the government taxes the public to secure the revenue to pay bond interest. Since the new system would require the imposition of heavier service charges than at present in order to pay the costs of bank operations, bank depositors would bear the burden. These charges would have to be high enough to remunerate the capital invested in banks or it would be withdrawn to

be used in other employments. Thus the total charge to the public for banking services would not be changed unless the plan could provide greater efficiency and less risk in the operation of our banking system. The burden might be differently distributed, however.

Criticisms of the hundred per cent reserve plan. — Although the 100 per cent reserve plan has been widely supported by many economists of outstanding reputation, it has not been without its critics. For the most part, the objections have dealt with the economic effects of the plan rather than with its technical details. One critic ¹³ concedes that although it would encounter some initial difficulties of a mechanical nature, they would not be insurmountable.

One of the most articulate critics of 100 per cent money has been Hansen, who has condemned, not only this scheme, but others of similar theoretical implications. His criticism of fixed money plans in general and the above reserve plan in particular is as follows:¹⁴

Thus, in effect, it is argued that the way to cure, or at least alleviate, the rigidities from which capitalism now suffers, is to impose still another rigidity — an inflexibly constant money supply. That expansion of bank credit facilitates, if it does not engender, the boom, is of course admitted by almost everyone. And since the boom is, as Juglar pointed out, the progenitor of the depression, it is not an unnatural thought that greater stability might be achieved by fixing rigidly the quantity of money and credit. But this sort of reasoning is dangerous. Granted that violent fluctuations in bank credit have intensified industrial fluctuations, it does not necessarily follow that a fixed quantity of credit would eliminate business fluctuations or even temper them. Moreover, even though it were demonstrated that an inflexible credit supply would stamp out every boom, it does not follow that stability of economic life would thereby be achieved. For it may well be that modern capitalism as a system of free enterprise could not survive unless it were permitted to launch forth periodically in just the kind of expansive activities which characterize the boom. Certainly a good case could be made for the thesis that the surest way of destroying the system of private enterprise would be to restrict its access to "free air," to prevent expansion, growth, and progress, by strait-jacketing it in a regime of "neutral" money, or, worse yet, an inflexible money and credit supply such as is proposed in many of the hundred-per-cent plans.

Such a criticism, it should be noted, stresses the value of credit expansion as an institution which aids adaptation to changes, while the theory of the full reserve plan emphasizes the disruptive character of flexible credit facilities. It appears that Hansen's criticism

¹³ Lehmann, Fritz, "100% Money," *Social Research*, February 1936, pp. 37-57.

¹⁴ Hansen, A. H., *Full Recovery or Stagnation?*, pp. 113-114. New York: W. W. Norton and Company, 1938.

is directed more specifically toward those plans which do not admit cyclical changes in money supplies, rather than toward those, such as that proposed by Fisher, which allow for such changes.

It is possible to discuss the operation of this reserve plan in terms of the motives for liquidity which were presented earlier in the discussion of the demand for money. If we assume the start of a decline in business volumes, the monetary changes, under present banking organization, would show a repayment of bank loans from business and income balances and a greater holding of funds in satisfaction of the speculative motive. If the decline proved severe, cash holdings might become so large that emergency powers of note issue would have to be called into use. This process would be carried to the point where, with the then prevailing state of expectations, the interest rate would bring this demand into equilibrium, or where no additional notes would be desired.

If these same conditions prevailed under the 100 per cent reserve plan, the new monetary authority would increase the note issue without the necessity of using emergency powers. Such increases would have to be continued until an equilibrium was reached or until the demand for money was satisfied at the prevailing rate of interest. The difference between the operation of present reserve requirements and the operation of the proposed reserve requirements would be that monetary equilibrium would be achieved at a lower rate of interest under the full reserve plan, since the public would know the notes would be available without limit if necessary. Such alleviation of economic instability as would follow from this plan might be worth its cost to the public. But if any real progress is to be made, some method must be found for keeping the balances stable in the income category rather than permitting their periodic transfer into hoards.

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